FEDERAL TRADE COMMISSION

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FEDERAL TRADE COMMISSION

In the Matter of:	)
SCHERING-PLOUGH CORPORATION,	)
a corporation,	)
and	)
UPSHER-SMITH LABORATORIES,	) File No. D09297
a corporation,	)
and	)
AMERICAN HOME PRODUCTS,	)
a corporation.	)
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Friday, March 8, 2002

9:30 a.m.

TRIAL VOLUME 29

PART 1

PUBLIC RECORD

BEFORE THE HONORABLE D. MICHAEL CHAPPELL

Administrative Law Judge

Federal Trade Commission

600 Pennsylvania Avenue, N.W.

Washington, D.C.

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P R O C E E D I N G S

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JUDGE CHAPPELL: Good morning, everyone.

ALL COUNSEL: Good morning, Your Honor.

JUDGE CHAPPELL: Let's reconvene 9297.

What's next?

MR. SCHILDKRAUT: Schering-Plough calls James O'Shaughnessy to the stand.

JUDGE CHAPPELL: Did Mr. Carney have some evidentiary matter?

MR. CURRAN: Yes, he's back at the office. We figured we would bring that up with Your Honor either after the morning break or after the lunch break.

JUDGE CHAPPELL: That's fine.

MR. CURRAN: Thank you.

JUDGE CHAPPELL: Raise your right hand, please. Stand, please.

Whereupon--

JAMES P. O'SHAUGHNESSY

a witness, called for examination, having been first duly sworn, was examined and testified as follows:

JUDGE CHAPPELL: Thank you, be seated.

State your full name, please.

THE WITNESS: My name is James O'Shaughnessy, spelled O ' S H A U G H N E S S Y.

DIRECT EXAMINATION

BY MR. SCHILDKRAUT:

Q. Mr. O'Shaughnessy, where are you presently employed?

A. I am vice president and chief intellectual property counsel for Rockwell International.

Q. And what is it that you actually do there at Rockwell in that employment?

A. I am responsible for the company's intellectual property, obtaining suitable intellectual property protection for their innovations, if any, against claims of infringement, and prosecuting claims of infringement as appropriate.

Q. Okay. And why were you hired by Rockwell?

A. I was formerly a partner at Foley & Lardner, and Rockwell was one of my clients, and the company, during its transition from an aerospace and defense company to a commercial concern, had found that it was the subject of quite a number of patent infringement lawsuits -- in the aggregate, about ten -- amounting to what were a billion dollars in claims. The company asked me to join to manage that litigation successfully.

Q. Is that your only employment at this time?

A. No, one of the arrangements I have with

Rockwell permits me to do some consulting and expert witnessing, such as this case, but also to maintain in a reduced role an ADR practice, alternative dispute resolution practice. There are certain guidelines I need to follow. So, for example, unlike most people in the courtroom today, I'm on vacation.

Q. Can you explain a little more about what ADR is?

A. ADR is an acronym for alternative dispute resolution. It was popularized I think most by the CPR Institute for Dispute Resolution, and their mantra is alternative to litigation.

Q. What was your employment before Rockwell?

A. Well, prior to that, as I said, I was a partner at Foley & Lardner for about ten years.

Q. And what was your specialty there?

A. Intellectual property. My practice engaged in counseling, litigation and ADR.

Q. And before Foley & Lardner?

A. Prior to that, I was associate patent counsel at Kimberly-Clark, and before that I had a number of jobs early in my career as a lawyer.

Q. And what's your educational background?

A. I was graduated from Rensselaer Polytechnic Institute with a Bachelor of Science degree, and then I

attended Georgetown University Law Center here in Washington, D.C.

Q. And how many intellectual property cases have you been involved in in your various roles?

A. Approximately 100.

Q. And what kind of cases were they?

A. The vast majority were intellectual property cases, not all of them. Some were outside the scope of technology disputes, but I'd say at least 80 of those were in the area of intellectual property, and most of those intellectual property cases are patent cases.

Q. And you mentioned that you've done some arbitrations?

A. Yes.

Q. And could you explain what you do in these arbitrations?

A. My arbitration practice has been divided between some -- well, I guess the specific answer is I adjudicate disputes, but through the CPR, I do a lot of what's called ICANN arbitration, arbitration over internet domain names. I also serve as a permanent member of a panel, an arbitration panel established by AT&T and Bell South under the interconnect agreement between those companies.

Q. And what do you do on that panel?

A. It's a standing panel that was put in place by those two companies in anticipation of any problems they would have. Right now the panel, though established, is dormant because there are no disputes to be adjudicated.

Q. You've told us you also act as mediator. Could you tell us exactly what you do in your role as a mediator?

A. In my mediation practice, my principal role is to facilitate resolution of disputes between parties who are at least ostensibly committed to resolving their disputes, but it's a facilitative role.

Q. And do you have any -- are you a member of any professional organizations?

A. Throughout my career, I've been a member of several organizations. Two in particular would be relevant to today's proceedings. For about 20 years I've been an active member of the Licensing Executives Society, which is an association of about 5000 members. The common interest is the licensing of technology and technology transfers and the like. The membership is approximately half lawyers and approximately half businessmen and women.

The other would be the CPR Institute for Dispute Resolution, which is an organization, again,

I've been active in for about 20 years. That is the -- I think the champion of ADR, as I described it earlier.

Q. And what roles do you participate in in these organizations?

A. Both are relatively similar. In LES, I have chaired a number of committees. In the area of ADR, I have lectured both in workshops and in plenary sessions to the members of the organization. In CPR, I have -- I'm trained as a mediator by CPR. I lecture at CPR meetings and now help them train mediators from time to time.

Q. And what sort of subjects are you lecturing in?

A. Primarily mediation, sometimes arbitration, but usually mediation is what I consider to be the best form of ADR.

MR. SCHILDKRAUT: Okay, Your Honor, Schering offers Mr. O'Shaughnessy as an expert in negotiation, resolution of intellectual property and patent disputes and litigation.

MS. CREIGHTON: No objection, Your Honor.

MR. CURRAN: No objection, Your Honor.

JUDGE CHAPPELL: Motion granted.

BY MR. SCHILDKRAUT:

Q. Have you been retained as an expert in this matter?

A. Yes, I have.
Q. And by whom?
A. Schering-Plough.
Q. And what was your assignment?
A. I was asked to evaluate and form an opinion on three different subjects. The first was the settlement of patent disputes in general and the use of extrinsic value creation as a tool in the settlement of those kinds of disputes.

Secondly, I was asked to study the expert report of Professor Bresnahan and determine where I would disagree with his position on various issues.

And thirdly, to offer my position, my thoughts on what might happen were the Commission to adopt some of the suggestions in Professor Bresnahan's report.

Q. Were you asked to review the entire record of this case to render your opinion?
A. No, not at all, no. Most of my position comes out of my own experience and not the record itself.
Q. You mentioned patent disputes, so let's start there.

What is a patent?

A. Well, most fundamentally, a patent is the legal right conferred by the Government on the owner to exclude others from engaging in unauthorized activity,

such as making or using or selling the subject matter for patent claims.

Q. And you mentioned patent disputes, so let's go right to that subject.

In your experience, what goes through the minds of business managers when they're engaged in intellectual property or patent litigation?

A. Well, the managers I know, it's usually, why me? They view it as as welcome as a disease. It's not something that's normally within the scope of what they do. They are not pleased by the need to engage in patent infringement litigation. They understand it, whether by experience or vicariously, to be time-consuming, to be expensive, to create a great degree of uncertainty in their planning, and they see even from a plaintiff's point of view nothing particularly good can happen from it.

Q. You mentioned that it creates a great deal of uncertainty in planning. How does the intellectual property litigation do that?

A. Well, intellectual property litigation in general tends to be somewhat more uncertain I think than other types of litigation. I might mention, for example, that during the 1990s or the late 1990s, the Federal Circuit had a reversal rate of about 50 percent

in whole or in part. So, even people who thought they were really equipped to understand and be able to predict the outcome of litigation had to step back and wonder really what degree of certainty can we expect here in the outcome of this litigation?

When you graph that then onto a business planning process, things become even worse. Lawyers may be equipped to understand and appreciate the problems of uncertainty. Many business managers, while I guess theoretically they can appreciate it, as a practical matter, they deplore it. Their job is to allocate scarce resources. Their job is to make a plan for the company that will endure over a period of time.

When you add this extraordinary uncertainty, something they are not familiar with, it confounds the decision-making process. It makes resource allocation much more difficult, and because it's unfamiliar, they don't like it.

Q. And so do they place a value on certainty?

A. Absolutely. I know from my mediation practice, I've seen people make compromises in order to achieve certainty. From my counseling in Rockwell, I know from firsthand observation. I have heard executives say that they will pay for certainty to avoid the unpredictability in the outcome of patent litigation.

Q. Okay. How does it affect investment, uncertainty?

A. Well, investments made under conditions of certainty usually can be made more rationally, more reasonably. One with a greater degree of predictability can make a plan to invest in the development of a new product, to develop the market for that product, to engage in the investments necessary to bring it to that market.

As soon as an extraordinary type of uncertainty appears, now their planning is confounded, as I said. It makes it more risky, and these are the kinds of risks that are just not within the ordinary ken of the average businessman. They don't experience them.

Q. Let's -- excuse me, I'm sorry. Let's put tab 1 up on the screen. This is the deposition of Martin Fliesler. Could you tell us who Martin Fliesler is?

MS. CREIGHTON: Your Honor -- I'm sorry, Mr. O'Shaughnessy -- objection. Mr. Fliesler is an expert who we had contemplated calling in rebuttal, but I have informed counsel that we will not be. So, it's unclear what would be the basis on which Mr. O'Shaughnessy would be testifying about his anticipated testimony.

MR. SCHILDKRAUT: Yes, I was told this morning that Mr. Fliesler will not be testifying, but the

expert opinion of Mr. Fliesler I think is relevant to this proceeding. This is from his deposition, and complaint counsel has been allowed to put in lots of deposition testimony, and this is going to be supportive of Mr. O'Shaughnessy's testimony, and in other cases, Mr. O'Shaughnessy is going to be explaining some of the points of Mr. Fliesler.

MS. CREIGHTON: Mr. Fliesler's testimony or deposition was not something that we were notified would be something on which Mr. O'Shaughnessy would rely. It's unclear that it -- that we have any foundation that it's the kind of evidence on which an expert in Mr. O'Shaughnessy's field ordinarily would rely in forming his expert opinion.

JUDGE CHAPPELL: What's it relevant for?

MR. SCHILDKRAUT: Excuse me?

JUDGE CHAPPELL: What is it relevant for?

MR. SCHILDKRAUT: It is relevant to showing that other experts having the same opinions as Mr. O'Shaughnessy on this matter, and I think that is very probative of Mr. O'Shaughnessy's opinion as well.

JUDGE CHAPPELL: Is this something he relied on to form his opinion?

MR. SCHILDKRAUT: No, his opinion was formed before Mr. Fliesler was deposed. Mr. Fliesler was

deposed and his report actually came in after Mr. O'Shaughnessy's report was --

JUDGE CHAPPELL: Objection sustained. It's not coming in.

BY MR. SCHILDKRAUT:

Q. Are you familiar with the term "risk aversion"?

A. Yes, I am.

Q. And how would you define it?

A. I think classically "risk aversion" is defined as -- or a "risk averse" person is defined as someone who would be unwilling to take a reasonable bet. Where I see risk aversion, it really is the obverse of the certainty that we just discussed. A person who strives for certainty is less risk averse than someone who is more risk-neutral and risk-loving.

Q. In your experience, how common is risk aversion or the preference for certainty among firms attempting to settle intellectual property disputes?

A. In my mediation and settlement practice, I see it all the time. It -- it is very evident, especially when in a mediation you have a businessman or businesswoman present in the room. They're the ones who really feel it, because they're the ones with the P&L responsibility, but risk aversion is -- it's palpable.

Q. And why specifically in intellectual property disputes are firms risk averse?

A. Well, risk aversion or risk profiles tend to vary with a lot of factors, one of which would be the sunk costs a party has in the investments that party has made in developing a product, in developing a market for the product and the means to deliver it. These are all very expensive investments.

Moreover, when one makes such an investment and is relying on a stream of income from it, not only must you recoup the investment and some premium for the risk, large companies, such as Rockwell and others, need that stream of income to fund continuing innovation. They need to be able to fund the failures as well as the successes.

So, when there is so much reliance placed on that stream of income in respect of a patent and product in process, managers who are responsible for that asset are understandably risk averse, at least in my experience.

Q. Well, if firms are risk averse, why don't they just go out and buy insurance?

A. We have looked at insurance in the field of intellectual property and specifically patents, and there are policies offered for those who wish to assert

a patent and other policies offered for those desiring to defend against claims. Our analysis of all the policies is that they are not commercially reasonable.

Q. Okay. Does risk aversion affect the range of potential settlements in litigation?

A. Yes, it does, and in fact, in a very predictive way. The more risk averse a party, the more -- the more it opens up other avenues for exploration for settlement.

Q. I think you said at one point, so I think we need to correct it, did you mean to say a person who strives for certainty is less risk averse?

A. No.

Q. Okay. More risk averse, is that what you intended to say?

A. Yes, yes. Well, there's a direct correlation I guess is what I meant to say. If I said it otherwise, I misspoke.

Q. Who typically in your experience in mediation and in other intellectual property disputes is -- among the parties is more risk averse?

A. Usually but not always it's the patent holder. It's the party that has relied on the patent system to shelter those investments I mentioned, and he's made often times very large investments in product

development, market development and the like. They need to be able to recoup that investment, and they require certainty, and with that certainty comes a higher degree of risk aversion.

MS. CREIGHTON: Your Honor, I'd like to move to strike the previous question and answer. I don't believe it's within the scope of Mr. O'Shaughnessy's report.

MR. SCHILDKRAUT: That risk aversion isn't in the scope of his report?

MS. CREIGHTON: No, the patent holder is more likely to be risk averse.

MR. SCHILDKRAUT: I don't -- I think that is well within the subject of risk aversion and how these disputes are, in fact, settled. I'm not sure the specific sentence that -- as to who was more risk averse, the patent holder or the other party, is in his report, but it's well within the scope of his report on risk aversion.

JUDGE CHAPPELL: So, his expert opinion or his report that he submitted indicated he was going to testify about risk aversion?

MR. SCHILDKRAUT: Oh, absolutely.

JUDGE CHAPPELL: And obviously about patents?

MR. SCHILDKRAUT: Yes.

JUDGE CHAPPELL: I'll allow it.

Let me ask another question to clarify. This Martin Fliesler?

MR. SCHILDKRAUT: Fliesler, yes.

JUDGE CHAPPELL: Complaint counsel, was that deposition admitted as an exhibit? Has that been admitted?

MS. CREIGHTON: No, Your Honor.

JUDGE CHAPPELL: Thank you.

You may continue.

BY MR. SCHILDKRAUT:

Q. You mentioned earlier that firms that have a preference for certainty or are risk averse are willing to give up something to obtain that certainty. Why is that?

A. Well, again, it goes back to this notion of planning, the ability to plan with, you know, some degree of reliability on the outcome. Everybody understands that there's no certain things in life, but business managers who have to allocate resources are familiar with certain types of risk, you know, the risk that a product can't be developed within its parameters, that it can't be made within the cost specifications, that the market may reject it. All of those things are within the ordinary scope of a

manager's experience and understanding.

Where it comes to patent infringement litigation, that kind of uncertainty is completely unfamiliar. They want to -- they want to take that kind of uncertainty out of the plan so that they can get back to running the businesses.

Q. And how common is that in your experience?

A. It's -- it's endemic in the field of patent infringement litigation. These are usually very serious cases amounting to in some cases you bet your life companies -- you bet your company cases. The stakes are very high.

Q. Let's go on to another subject.

How do the parties' world view of the litigation, their business, et cetera, affect the outcomes of settlements?

A. When parties come to negotiate, they, of course, bring into the conference room their understanding of the dispute. They know their position very well. They have a fairly good understanding of their adversary's position. In some cases, the parties have some experience in negotiation. They may not have negotiated the settlement of a patent case, but they have negotiated other transactions, and they bring into the court or to the conference room that general sort

of set of experiences, you know, the experiences of -- the common experiences of life, I guess.

Along with that, they bring in, you know, their normal fears and worries as well. So, for example, if I could use a -- something that maybe everybody in the courtroom is familiar with, the purchase and sale of a car. You've heard the term "buyer's remorse." It's something that really affects a lot of negotiations over automobiles.

You know, you go ask the dealer, you know, what's your best price and let me see the sticker. You're always wondering, is that really the best price I can get and did he really pay the sticker price? And so people shop a lot. And they do it because they're worried that they are going to find after the transaction that they could have got a better deal, or worse yet, their neighbor's going to tell them what a better deal he or she got, and that's a form of buyer's remorse.

It could be the same in the sale of a used car, where the purchaser is wondering, well, does the dealer really know about the defects in this car? Even if I take it to my own mechanic, am I going to find out later it's a lemon, it's a bad deal? And again, it's this notion of buyer's remorse. So, we're all familiar

with that kind of remorseful feeling, and people, when they negotiate -- now back in the context of a patent infringement litigation and the settlement of it -- they bring these kinds of experiences into that negotiation with them, and they're worried that the other side will have information on a matter of consequence to the outcome that is superior to theirs and that when the transaction is through, they're going to be bested. Somehow they are going to get into that win-lose posture that sometimes is talked about.

And so people who lack the information on an issue of consequence usually dig their heels in and negotiate very hard, and it's something -- it's a dynamic that's present in these kinds of negotiations and settlement, and it's something a mediator has to be aware of if he or she is going to manage the parties to a successful resolution of the dispute.

Q. What has been your experience regarding the litigating parties' expectations concerning the outcomes of litigation?

A. Well, I think you find litigating parties all over the map when it comes to their expectations, and people have classified them in lots of different ways. Professor Bresnahan had three classifications of parties and their expectations being equally optimistic

or I guess optimistic, pessimistic or overly pessimistic and the equal assessment case, being his three, and in my experience, I've seen two additional categories.

Professor Bresnahan's overly optimistic category is certainly true, but there are cases where people are wildly optimistic, well beyond the normal range of optimism, and that is not all that uncommon, I believe. And then there's a last category that I've identified, and that's a party who's somewhat indifferent to the outcome, because they're using the litigation for a specific person, they have a different agenda. They are not indifferent to the process, but they are indifferent to the outcome.

I'd say most of the parties I see fall in the optimistic categories, either highly optimistic or wildly optimistic, but there are others in the other categories as well.

Q. Okay. How does over-optimism affect the likelihood of settlement?

A. Well, over-optimism is at tension with risk aversion. Risk aversion drives parties towards settlement. They are willing to pay for that certainty. Optimism or over-optimism tends to drive them apart and create a wider gap in their positions,

their negotiating positions. So, the two are at odds.

Q. Okay. Can firms engaged in intellectual property litigation always come to a settlement when they are over-optimistic and risk averse?

A. I think it depends on which predominates. If -- if a firm is more over-optimistic than risk averse, then probably not. If risk aversion still is the predominant factor underlying the negotiation, then it's possible, but the two are in tension, and it's not possible to tell from just those two descriptions as to what the likely outcome will be.

Q. Okay. Well, let's talk a little more about outcomes of trial. Let's go to tab 5. This is testimony of Professor Bresnahan, and if you go to 1163, line 23, then going on to the next page in 5, let me read that, and this was cross examination by Mr. Nields.

"QUESTION: The outcome of that trial is going to depend namely, isn't it, on the intrinsic merits of the case?

"ANSWER: Yes, though it may also depend on the parties' behavior in it, which is why I said not necessarily.

"QUESTION: And it's going to depend, therefore, on the evidence that's presented and the

relevant law, correct?

"ANSWER: Yes."

Do you agree with Professor Bresnahan?

A. Yes, I do. I think, you know, the merits are something that always inform the judgment of the parties in settlement. Certainly the merits will inform the outcome if litigation is conducted. And as I said earlier, the combination of these factors, not any one of them in isolation, can create a great deal of uncertainty.

The merits are the merits, but then we have the Federal Circuit with a 50 percent reversal rate. So, the merits are very important but have to be kept in the proper context.

Q. Are there a set of reasons -- we talked earlier about the fact that you can't always come to a settlement. Are there a set of reasons that you think about about why firms can't always settle litigations?

A. Well, as I said earlier, there may be inadequate risk aversion, too great a degree of optimism. There may be too much time, there may be not enough time. There may be no one there to catalyze the settlement.

As a mediator, I've often been envious of a judge who can twist some arms. All I have is the sense

of moral persuasion to convince them it's in their best interests to settle, but if you can't bring them together at the right time, then a settlement on that day is just not possible.

Q. In your role as a mediator, what would you do at this point in order to attempt to achieve settlement?

A. Let me kind of set the stage for you so that you picture in your mind's eye what's really going on here. You know, keep in mind, you have two parties who are in litigation, and litigation has been likened by some writers to war. This is an enemy of my company. I think perhaps it's an extreme analogy, but nevertheless, there is a real sense of animosity, maybe not hatred, but truly animosity in the room.

These are people trying to harm my business. I have the better case. They should just see that and go away. And as the mediator or the settlement agent is trying to bring them closer together, concessions are easily made at the outset, but the parties' positions tend to rigidify at some point in the negotiation, and there's a gap between them.

A skilled mediator will recognize that -- you don't want to push the parties beyond that, because now you're bringing into the dynamic the sense of

capitulation, and people don't like to capitulate. It may be a sense that, you know, I've given up enough, I'm not going to move another inch, a sense of pride. It may be, you know, millions for defense, not a penny for tribute.

There are a lot of human emotions that people bring into that negotiating session that get them to the point where they say I'm not going to bend another inch, and for a mediator to push further is counter-productive.

So, now, when you recognize that the parties are about as close as they're going to get on their -- under these circumstances, you take in essence an excursion from the dispute. Now we're asking these people who had that animosity, who have this really contentious problem between them that may affect the livelihoods of a lot of people and the welfare of the company, to put that aside, to not think about it, to defocus from it and to go off into another -- another place in their mind, so to speak, and now begin to work collaboratively to work develop some extrinsic value to bridge that gap.

You know, the -- I'm not a psychologist, but I see an awful lot of psychology played out in these kinds of settings, and you're asking people to be

creative, to be imaginative, and at times I've asked them even to be playful in what they think about and how they might be able to find an opportunity to develop value outside the dispute, defocusing from the dispute, because that will impede their ability to be creative, but nevertheless, focus on an opportunity to develop a new relationship, maybe customer-supplier, licensor-licensee, form an alliance, but somehow enter into a relationship outside the dispute which has value in a very creative sense.

And then when they're through, if they're able to do so -- and customarily, if people work hard, they can find these extrinsic values -- then import that back into the dispute and find a way to bridge the gap in the positions. Now you have a global settlement of that dispute.

So, that's the environment in which a mediator, whether it be a magistrate judge or a commercial mediator, operates. That's the dynamic.

Q. Okay. What would happen if some rule of law chilled the extrinsic value-creating process? How would that affect the prospects of settlement in the matters you've been involved with?

A. Well, I find that in at least half the cases that I have been involved in, extrinsic value creation

has been absolutely essential to get to done, and what I mean by get to done, there's -- Fisher and Ury from Harvard wrote a wonderful little book called Getting to Yes. It's a great book, and they have written a lot more since then, but the notion of Getting to Yes is yes, I will. What's more important to me is getting to done, which is yes, I have.

If extrinsic value creation is taken out of the repertoire of the mediator, then at least in my experience, half of the settlements that I got through I could not have achieved at all. I don't know about how the dynamics would play out in other cases, but certainly it would have a profound and negative impact on my practice and I believe the practice of other mediators.

Q. In your settlement mediation practice, can you tell us how you specifically go about attempting to achieve settlement, what kinds of techniques you use?

A. Well, first we recognize there's a gap -- if there weren't a gap, they would have settled -- and somehow we have to bridge it, and the idea is not -- you don't need to over-create a lot of extra value. Keep in mind that there's a central dispute which is the real problem. You're trying to bridge a gap with this mediation.

So, the first thing I look around for, either if I'm the party or if I'm the mediator I will comport the parties to look around for, is something to trade. What do you already own that you could trade to the other party that would have sufficient value to them to permit them to settle the main dispute? If you don't already own something you can trade, how easy would it be to acquire something to trade? And there are a lot of examples of that.

Companies -- Micron Technology is one that comes to mind, has when they have been engaged in patent infringement disputes sought to purchase intellectual property rights from third parties that they can use to bridge the gap in positions, but they do it in a way where they can leverage, that the purchase price of the property to trade is less than the value of the gap. So, purchasing rights to trade.

In some cases, I -- in my own company, we've created value that we can trade, intellectual property value that we know would be of value to the other side. So, however you look at it, the first thing is what can I trade? Very common, I think most mediators will go there in the first instance.

Beyond that, it becomes part of this creative process I mentioned earlier, to be imaginative in

trying to find values, especially values where the two parties might view something in somewhat different lights, where one party can create something that costs it very little but it has greater value to the recipient.

So, in some cases, one in particular that I mention in my report, they created some script that then could be used for the purchase of product. This was a patent infringement litigation that had gone on for a long time. There was an awful lot of animosity. There was a lot at stake. And the basic concept there was to convert the plaintiff patent owner into a customer of the defendant patent infringer but to do so in a way that allowed both of them to realize value.

So, the infringer in that case issued a large quantity of script to be used by the plaintiff to purchase the infringer's product, but there was an limit on how it could be used, and in that case it was not just the use of a script but the use of a script plus money in order to purchase the product, which guaranteed to the seller not its normal profit margin but at least they weren't selling at a loss. They still obtained some profit.

Also, the script couldn't be used for 100 percent of the requirements of that party. So, there

would be additional purchases at full value. But it became a balancing of creating value in a commercial transaction.

I've used a stock bridge to get the two parties who are facing a gap in their positions and not willing to concede any further, and in that case one party who had a stock that was rising in the stock market contributed about half the value in stock of the amount of the gap with the guarantee that within a year that stock would be equivalent to the full value of the gap. It allowed the capital markets to supply what the parties didn't want to supply themselves.

And we go on with a lot of examples, but I guess the point of this is simply that one needs to be imaginative, one needs to be creative and not just stop when the parties say I can't settle, even though there's a gap in our positions, and go through some -- in the first instance some predictable ways of creating value, and then when that doesn't work, some more creative ways of creating value, but extrinsic value creation is the objective goal here.

Q. Well, if it's value creating, extrinsic value creation, why don't the parties just do the extrinsic value-creating deal separately and just keep litigating?

A. I would like you to repicture in your mind's eye what I described to you earlier, a lot of hostility, you know, people who are not getting along together, and now you've asked them to take a journey away from a dispute which has gone on perhaps for years and try to find a valuable relationship between them outside the source of that dispute.

Now, the reason they're doing it is to settle the dispute. They're not off trying to become friends. You can't delink them. They live together. They are interdependent. They are multiple components of the same transaction. It fundamentally makes no sense. It's illogical to me to think about just doing the extrinsic deal, then going back and litigating.

Some of these situations require a lot of cooperation between the parties. I'll give you an example from just ten days ago, a successful mediation after two years of a dispute that I on behalf of my company had with another party over patent infringement. It was not in litigation, but we settled with the aid of a mediator from JAMS who helped us narrow the gap and then helped us find some extrinsic value.

In that case the extrinsic value was found in an OEM relationship between the parties and an

opportunity they have -- their products are complimentary products -- to do some co-selling. Well, if you are going to take the OEM relationship and the co-selling and try to pursue that at the same time the parties are engaged in a rancorous dispute, it's unlikely that's going to happen. You can't delink them.

It might be that there's a payment of money involved, and if you're going to delink them, what you end up doing, in effect, one party is funding the other party's attack on its company. It's making it more able to continue the litigation. These are all kinds of dysfunctional approaches to resolution as opposed to things that promote a sound resolution of a problem, an enduring resolution of the problem.

Q. So, why don't parties just forget about extrinsic value-creating deals and just keep litigating?

A. Well, for the reason I mentioned earlier, that it may require them just to capitulate, and very few parties at the end of the day are willing to capitulate. It would take an enormous amount of risk aversion and a real failure in optimism before you get a party to do that, and that just doesn't happen.

Q. Are you familiar with the term "win-win"

propositions?

A. Yes, I am.

Q. And what does that mean?

A. Well, it's now I think in the vernacular. It refers to a transaction where both parties are able to walk away from the transaction believing that it has great value to them and appropriate equal value, to be contrasted from win-lose, which perhaps a few decades ago was the way a lot of people negotiated, you know, how they could engage in some -- you know, if not sharp practice, you know, at least one upsmanship on the other side, and the literature showed over a period of time that those kinds of deals really were -- there was a false sense of a win there, because the party in the posture of the loser, especially if there was a relationship, customer and supplier relationship, would feel so bad about the outcome that it would destroy the relationship.

Then, of course, there are the lose-lose relationships, which we rarely see because there's nothing in it for anybody, but there's a large literature that's been written over the years on this whole concept of win-win or creative problem solving some call it.

Q. Can a branded patent holder win in a settlement

with a generic in a patent litigation without delaying the entry of the generic?

MS. CREIGHTON: Objection, Your Honor, lacks foundation. I don't know that we've established this expert has any experience in Hatch-Waxman cases or pharmaceutical cases for that matter.

MR. SCHILDKRAUT: Well, I'll ask the question another way, then.

BY MR. SCHILDKRAUT:

Q. I mean, in general, when you have a patent holder in the market, in the matters in which you've been experienced, can you have a win situation without throwing the other guy out of the market?

A. Surely, and in fact, I mean, I guess -- I guess I couldn't put figures on how common it is, but it's common enough, you know, there are a lot of times when people will sort of split up the rights of a patent, if I could use that term, and in fact, I've engaged in those kinds of patent-splitting arrangements, so that, for example, you might divide a patent along territorial lines. It used to be more common than it is today.

More common now is dividing a patent along fields of use. It may be that the other party can address a certain market sector that's important to it

without unduly interfering with the position of the other party. So, a field of use is not a bad way to think about splitting a patent and allowing the party to win, if you will.

Another common approach in my experience is performance, so that, for example, in a hypothetical, because I don't want to give a real example that would give away the parties, say you had a microprocessor. It may be that you can sell a microprocessor up to a gigahertz but not above using this patented technology, and so performance characteristics become a discriminating factor, and indeed, you could mix and match. It's performance characteristics under a gigahertz and under a field of use of only personal computers. So, you can begin to divide up and split up the rights amongst the parties. It could be you can implement this technology in hardware but not software.

So, there are a lot of ways that the patent owner can protect its position and the infringer can still be accorded some rights that ultimately amount to a win, a win for both.

Q. Let's turn to tab 14, and this is testimony of Professor Bresnahan again, and we're at 526 of the record at line 19, and I'm going to read that until line 1 of the next page.

"QUESTION: Professor, why did you conclude that the payment in the settlement between Upsher and Schering was made for delay?

"ANSWER: There are a number of bases for that. The -- we begin with the substantial incentives of the parties to delay in such a way and the contract between them which links payment to an entry date, that's the beginning."

We know you're not an antitrust lawyer, so I'm only asking you a question about your fields of competence.

In your experience in patent negotiation, do parties try to obey the law in the context of settlement?

A. I'd say uniformly. I in my experience have never seen a situation where the parties were not mindful of the law and their need to adhere to the law.

MS. CREIGHTON: Objection, Your Honor, I'd move to strike. This seems to be beyond the scope of this witness' expertise as to whether or not companies obey the law. That's something that is either -- a common experience to all lawyers and people in the legal profession but certainly not something that I would say which Mr. O'Shaughnessy has expertise in.

MR. SCHILDKRAUT: Well, two points, Your Honor.

First, I asked him for an answer within his field of expertise, and two, I'm asking him in his position as a -- as a mediator, when he's -- when people are, for example, told that something's illegal, what do they then do? So, I think this is specifically within his two fields of expertise.

MS. CREIGHTON: There's also been no foundation laid, Your Honor, that that, in fact, has ever come up in Mr. O'Shaughnessy's mediation practice or that the parties would tell him about what their thought processes are in the event that it does.

MR. SCHILDKRAUT: Professor Bresnahan has given an incentive that -- given a -- has basically argued that people who have incentives to break the law will break the law. Mr. O'Shaughnessy's experience about whether that's, in fact, true through his mediation process is within his fields of expertise, I think is very relevant.

JUDGE CHAPPELL: I'll overrule it to the -- I'll overrule the portion beyond the scope of his expertise, because the question limited it to his fields of competence; however, I'm sustaining it to the extent it asks him do people try to do something to the extent it's calling for him to tell me the intent of the parties. He can tell me what he knows. Thank you.

BY MR. SCHILDKRAUT:

Q. Why don't you explain what you know.

A. Let me approach it this way: When mediating, as I said, you take people on this excursion for extrinsic value creation. You've asked them to be creative, and you've asked them to be imaginative, and sometimes I've even asked them to be playful in the way they think about how do you create value outside the scope of this dispute.

They are businessmen and businesswomen involved in the process, and they take this very seriously, and there are times when, in their imagination or in their efforts to be creative, they step over the line of what's legal. So, they might say, well, could we do this or could we do that, or I have an idea, let's do it this way, and they're counseled, no, you can't do that. That would be illegal. And the answer is, oh, okay. Well, let's try something else.

So, they're -- when you ask people to be creative without the bounds of legality around it, they may come to a point where they dream up a potential transaction which just can't be implemented lawfully. In my experience, whenever that's happened, people have backed off when they've been told you can't do it.

Q. You mentioned earlier that you -- that you and

other mediators and judges try to exert pressure on people to settle. How do you exert pressure on people to settle?

A. Well, as a judge, it's a lot easier I have to say. There's a lot of arm twisting, at least potentially. As a mediator, you're really trying to bring the people together in a consensual process, but there still is a sense of pressure that you can create.

Again, go back to that picture I tried to paint for you. You've taken people outside the scope of the dispute, and you're telling them you now have a chance to settle this case. There's a pressure to do so. The mediation may have gone on for a day or two. People have started to have an investment in the process. There may be some real momentum forming toward a resolution. They really want to settle in most cases.

Now you galvanize that pressure in a particular way. Don't lose the moment. It's sort of like the fourth quarter in an NBA game, you know, the clock is ticking, and the closer we get to the end, the more the pressure is to win here, and to win here is finding a way to get to done, and so you want to galvanize that investment and galvanize the pressure, continue adding the pressure to it and tell them you've got to come up with a solution to this. If you don't do it now, you

will lose it, because that dispute that we put aside isn't static.

The positions that we established just earlier today or yesterday in this hypothetical won't remain the same. They will change. This is your one chance to seize that opportunity, get it, strike while the iron is hot. There is no time for a lot of analysis. There is no time for, you know, endless due diligence. The idea is come up with a solution to this problem now and bridge that gap.

And if you do it -- if you Knute Rockne them so to speak, you can get to done.

Q. Okay, let's go to tab 17. This is more testimony from Professor Bresnahan, and I will read this testimony. It starts at 1021 of the record, goes from line 7 to line 23.

"QUESTION: Now, let's say life isn't so simple and the parties say we want one global deal tonight and we want to get this settled. Are you telling me that Schering-Plough needs to do some kind of ordinary course of business assessment of the licensing in order to be safe with this valuation calculation, sir?

"ANSWER: In order to be safe? The -- I would -- you asked me this question in deposition, and I answered it as I just answered it. If you wanted to

be safe, the thing to do would be break the linkage.

"QUESTION: So, can you sitting here today tell me of one transaction that Upsher-Smith and Schering-Plough could have entered into in a single, global transaction that would have, you know, readily satisfied the Bresnahan test, in one, single, integrated agreement?

"ANSWER: No, I can't. If it -- if it had both of the elements in it, no."

If the FTC were to adopt the Bresnahan approach, how would that affect the settlement process?

MS. CREIGHTON: Objection, Your Honor insofar as we haven't established a foundation that Mr. O'Shaughnessy knows what the reference is to the two elements that Professor Bresnahan referred to in his answer.

JUDGE CHAPPELL: Sustained.

MR. SCHILDKRAUT: Where were the two elements in this answer?

MS. CREIGHTON: "If it had both of the elements in it, no."

JUDGE CHAPPELL: I'm sustaining it, Counselor, because you're asking him to apply tests that I don't know he knows yet.

MR. SCHILDKRAUT: Well, I --

JUDGE CHAPPELL: So, you need a foundation.

MR. SCHILDKRAUT: Well, I can have him answer, Your Honor, based on the first question and answer, which goes to line 16, if that's the problem.

JUDGE CHAPPELL: You're asking him a hypothetical or a question based on the Bresnahan approach.

MR. SCHILDKRAUT: Yes.

JUDGE CHAPPELL: I'm not allowing it unless you show me that he knows what the Bresnahan approach is. Is that clear?

MR. SCHILDKRAUT: Okay -- oh, okay, now I understand. I'm sorry.

JUDGE CHAPPELL: Proceed.

MR. SCHILDKRAUT: I'm sorry, Your Honor.

BY MR. SCHILDKRAUT:

Q. Can you tell us your understanding of the Bresnahan approach?

A. Well, as it's related to the testimony you just read, one is that one needs to engage in customary due diligence in the extrinsic value creation transaction. Secondly, that the two can be delinked, that if -- if it's a worthy transaction in the scope of settling the dispute, it's equally worthy outside the scope of the dispute. That's what I understand this to mean.

Q. Well, whether it's the Bresnahan approach or not, that understanding, if that were the case, how would that affect settlements?

A. It either would make most settlements difficult or impossible to achieve. Together, it would -- I think it would damn most settlements. I don't think you could reach a settlement with those conditions imposed.

Q. And why is that?

A. Well, there is this pressure to settle. In this extrinsic value-creating deal, you're relying on the pressure to settle and the desire of the parties to resolve their dispute. To put together a value-bearing transaction that is adequate to bridge the gap in their positions -- keep in mind, the big problem is really big. This outside deal may be relatively small in comparison to it.

There isn't time to stop and do a lot of due diligence. If you were to stop and lose the momentum of settlement, there's no guarantee that when you come back in weeks or months later that those two positions are still going to have the same momentum. Things happen in litigation. It moves on. It ebbs and flows. The parties may become more polarized, not less polarized over that time.

Now you have got a value-creating transaction which you've worked very hard on, you've done your due diligence, and what you find is now it's inadequate to fill the gap that has grown. So, that's one reason.

MS. CREIGHTON: I'm sorry, Mr. O'Shaughnessy, excuse me.

I didn't think that -- necessarily that the question called for it, but to the extent that Mr. O'Shaughnessy's testifying about the necessity for due diligence in the context of settlement, that is not within the scope of his report of his proffered testimony. So, I would object on that ground, Your Honor.

MR. SCHILDKRAUT: Well, I think Mr. O'Shaughnessy was talking about the time pressures of getting these things done, and that was the context of this, and, you know, those pressures were all part of his report.

JUDGE CHAPPELL: So, he is not testifying as a due diligence expert?

MR. SCHILDKRAUT: No.

JUDGE CHAPPELL: Then it's sustained, but effectively there is no harm. We're not accepting this as a due diligence expert.

MS. CREIGHTON: Your Honor, I don't believe

that the issue of the practicality of entering into a settlement now versus over a period of time was within the scope of his testimony either, whether specifically for the purposes of due diligence or otherwise. So, I would object on that ground as well.

MR. SCHILDKRAUT: Well, as I said, all I'm -- you know, all Mr. O'Shaughnessy is talking about is the time pressures of settlement and how to get to yes in a short period of time, and so that's clearly within the context of his report. It was all about how to do that through extrinsic value creation.

JUDGE CHAPPELL: I'll allow it. Go ahead.

MR. SCHILDKRAUT: Okay.

BY MR. SCHILDKRAUT:

Q. What is your understanding of a reverse payment?

A. Well, the only understanding I have of it is in the context of this case, and it's net cash consideration flowing from the patent holder to the infringer is the working definition I've been using.

Q. So, now, going back to the issue of settling deals with extrinsic transactions without reverse payments, couldn't part -- and -- couldn't parties continue to do such settlements with extrinsic value creation just by establishing that there was no reverse

payment in the extrinsic value creation?

MS. CREIGHTON: Objection, Your Honor. As I think the witness indicated in his previous answer, he has no experience with settlements involving reverse payments, so I don't think he has any basis to speculate on what would happen in a case where a reverse payment was offered but, in fact, was not pursued.

MR. SCHILDKRAUT: Well, I think actually what I'm saying is, I'm talking about doing extrinsic value creation without a reverse payment. That was the premise of the question, not that there is reverse payment in the -- in the hypothetical I've offered.

JUDGE CHAPPELL: So, do you want to restate the question?

MR. SCHILDKRAUT: I can say it again.

BY MR. SCHILDKRAUT:

Q. Going back to the issue of settling deals with extrinsic transactions without reverse payments, couldn't parties continue to do such settlements by just -- by just establishing that there was no reverse payment in the extrinsic transaction?

MS. CREIGHTON: And I object again, Your Honor, because the witness has no experience with settlements involving reverse payments. I don't know that he could

testify as to what --

THE WITNESS: I may have misspoken if that's the impression I gave you. I don't want to jump in --

JUDGE CHAPPELL: Well, if the objection is for lack of foundation, I'll sustain it. I think we need to clarify whether or not he knows anything about reverse payments. If he doesn't, then let's not ask him about them, okay?

MR. SCHILDKRAUT: Okay, okay.

JUDGE CHAPPELL: Proceed.

BY MR. SCHILDKRAUT:

Q. Could you tell us what you understand about reverse payments in your experience?

A. Yes, and I hope I haven't misled the attorney here. I am using a definition which I understand within the context of this case. I never talked about reverse payments. I've never used that terminology. So, I'm trying to be consistent with what everybody else in the courtroom understands it to be, which is a net flow of cash from the patent holder to the infringer. It's not that I haven't seen them, but I've never used that terminology.

Now, if you would ask your question again -- and I hope I haven't confused people with my answer.

MR. SCHILDKRAUT: Your Honor, have we

established enough of a foundation to go forward with this question?

JUDGE CHAPPELL: Yes.

MR. SCHILDKRAUT: Okay.

BY MR. SCHILDKRAUT:

Q. Let me ask the question again.

Going back to the issue of settling deals with extrinsic transactions without reverse payment, couldn't parties continue to do such settlements by just proving to the FTC that there was no reverse payment in the extrinsic transaction?

A. I think the answer theoretically is yes and practically no, and here's the practical problem. When I have a patent litigation, if I'm the party in the sense of I'm representing my company or if I'm an outside counsel or if I'm a mediator, the parties know an awful lot about their dispute. They've spent perhaps years with it. In some cases, unfortunately, may have spent millions of dollars to get to the point of understanding their case, its strengths and weaknesses, the other side's case and its strengths and weaknesses.

They have come together out of a desire to settle, and they have an exquisite knowledge about that subject matter. Now they're going to enter into an

extrinsic value-creating transaction, and they're going to have to handicap the likelihood that they could convince the FTC or some other tribunal that there is no net payment. They may not understand exactly how that's going to be done. They may not understand the quality of proof necessary.

It may be that while they have a belief that if they're really risk averse, they're going to say, you know, risk aversion drove me to want to settle, but now I'm so risk averse that the problem handed to me about proving that there's no net payment keeps me from settling the case. So, it's a practical problem more than a theoretical problem. It's a problem of proof and a problem of perception and a new source of uncertainty.

Q. Let me ask you some hypothetical questions about what would happen under the following circumstances to your ability to settle disputes. Suppose a brand name company told you that the generic had asked for money and the brand name told you that it said loudly and clearly no money. Would you think you could facilitate a settlement using extrinsic transaction under the approach Professor Bresnahan has taken?

A. No, I couldn't.

Q. And why is that?

A. Not any longer. The fact is that -- again, I want to take you back in your mind's eye, I keep going back to that same hypothetical. I have asked parties to be creative and think about lots of things. I goaded them into saying something about money, but now, as soon as they have, under this test, once -- you can't unring the bell, because now, as soon as that becomes an issue, even if the other party says no, there will be a perception, because it was asked for, it was granted.

As a mediator, I couldn't in good faith pursue the settlement further. I couldn't lead the parties to a resolution of their problem, because as I say, you can't unring the bell.

Q. Okay. Suppose the brand name company told you that it evaluated potential extrinsic value-creating transactions and that the analysts had told you that the brand name -- told the brand name that it was a good deal -- let me read that again.

Suppose the brand name company told you that it evaluated a potential extrinsic value-creating transaction and an analyst had told the company that it was a good deal, would that solve the problem? Could you go forward with the extrinsic value creation?

A. Not under the theory of the case as I understand it from complaint counsel, because I believe that's what happened here.

Q. Okay. Suppose the brand name company told you that its analyst had said it was a good deal but it normally engages in more extensive due diligence, how would that affect your actions as a mediator?

A. Not at all. Not at all. I still have the same problem. I -- it would be unsafe, to use somebody else's words, to proceed further with the settlement once that had been broached.

Q. Okay. Well, so, what's the problem? Are settlements a good thing?

A. I think settlements aren't just a good thing, they're an essential thing. There are literally hundreds of thousands of cases filed in courts in the United States every year. The system is set up not just to foster settlement, but it's reliant on it. The system would gridlock if we didn't have settlements. They are absolutely essential.

Q. What kind of costs does it add to the court system?

A. Well, there's all the social costs that people talk about. It's well documented. You know, the cost that I see that really drives me in my decision making,

for every dollar spent in R&D, about 27 cents is spent in patent litigation. I don't know about elasticity, I'm not an economist.

What I do know is that if you get rid of settlements, that 27 cents goes up and the dollar goes down. There's less money available for innovation and more money gets sucked into the litigation process. So, for this economy to work well, settlements are essential, especially patent settlements.

MR. SCHILDKRAUT: No further questions, Your Honor.

MR. CURRAN: Nothing from Upsher, Your Honor.

JUDGE CHAPPELL: Cross?

CROSS EXAMINATION

BY MS. CREIGHTON:

Q. Good morning, Mr. O'Shaughnessy.

A. Good morning.

Q. Nice to see you again.

Mr. O'Shaughnessy, you have never negotiated the resolution of a dispute in a Hatch-Waxman case, correct?

A. That's correct.

Q. And you've never been involved in a Hatch-Waxman case as a party either, have you?

A. That's correct.

Q. The only patent case involving pharmaceuticals that you've had any experience with was over 20 years ago and involved Sensodyne Toothpaste, correct?

A. That's correct.

Q. You don't consider yourself an expert in Hatch-Waxman cases or the pharmaceutical industry, correct?

A. I do not.

Q. You have no idea whether payments by the patent holder to the infringer arise in one out of two Hatch-Waxman settlements or one out of a thousand, correct?

A. That's correct.

Q. You've been involved in about 50 to 60 patent cases as either a party or a neutral. Is that correct?

A. Correct.

Q. In all of those cases, you're not aware of any case settling in which the patent holder paid the infringer a cash payment up front at the time of settlement, correct?

A. A patent --

Q. Would you like me to reread the question?

A. Yes, I'm thinking through the question.

I believe that's correct, yes.

Q. A rule that prohibited such reverse payments

would only affect a few settlements, correct?

A. I don't know that --

MR. SCHILDKRAUT: Objection, Your Honor. He said he doesn't know how many settlements there are in the Hatch-Waxman context with reverse payments, so I don't see the foundation for the question.

MS. CREIGHTON: The question, Your Honor, was asking about his experience in handling dozens of patent cases as either a neutral or a party. It wasn't limited to Hatch-Waxman cases, and the previous answer had established that he's not aware of any case settling in all of those cases with a cash payment up front at the time of settlement.

So, so far as -- why don't I rephrase the question, Your Honor.

JUDGE CHAPPELL: Okay, you're rephrasing, all right.

BY MS. CREIGHTON:

Q. So far as you're aware, Mr. O'Shaughnessy, isn't it correct that a rule that prohibited such payments therefore would affect only a few settlements, correct?

A. I don't know that to be true, no.

Q. Is it correct, Mr. O'Shaughnessy, that a rule that prohibited reverse payments, to your knowledge,

would affect only a few settlements?

A. Again, I don't know that to be true, and I'm trying to separate my experience in the past from a generalization that you now have stated in going forward, and you're using that phrase, "net cash payments," and I'm thinking about consideration.

Consideration can flow in lots of different ways. We've discussed it before. I don't want to go too far with your question --

Q. Well, let me ask you this: As you understand Professor Bresnahan's rule, it would only affect settlements in a few cases, correct?

A. I don't know that to be the case.

Q. Why don't I show you, if I can turn it on -- I apologize, Your Honor. I'm going to have to zoom here.

A. I can't read this at all, I'm sorry.

Q. I apologize, Mr. O'Shaughnessy, let me just figure out how to zoom in. The problem is that it's a run-on question and answer, but I show you page 114, line 17 to page 115, line 3. It asked:

"QUESTION: What is your understanding of the rule that Professor Bresnahan articulates?

"ANSWER: Well, part of it is that a reverse payment is -- what he calls a reverse payment, there virtually would be a per se rule against it, that there

could be no flow of what he calls net consideration from the patentee to the entrant, and that were one to detect that, it's a litmus test for anti-competitiveness, and that there would be a conclusive presumption against those kinds of transactions where any kind of extrinsic value creation that contributed to a payment from the patentee to the entrant would be condemned."

Then you go on with your answer, and then the question, page 115, line 14:

"QUESTION: So, you would agree that it would affect only a few settlements?

"ANSWER: Well, relatively speaking, in comparison to all the cases that are filed, yes.

"QUESTION: Wouldn't it be fair to say that you've never been involved in or heard of a settlement that would be proscribed by that rule?

"ANSWER: You mean other than what we're engaged in now?

"QUESTION: Correct.

"ANSWER: Yeah, well, that would -- that's true."

Did you give -- did I ask you those questions and did you give those answers?

A. No, I --

MR. SCHILDKRAUT: Objection. Can you read all that off the screen or do you need a copy of your deposition?

THE WITNESS: It might be helpful with a copy. I can read a lot of it. What I can't read is the part in between that was left out.

MS. CREIGHTON: May I approach, Your Honor?

JUDGE CHAPPELL: Yes.

THE WITNESS: Page 114? This began at 114?

BY MS. CREIGHTON:

Q. Page 114 was the preceding question that set the predicate for your -- for the questions and answers in which you were articulating your understanding of Professor Bresnahan's rule regarding reverse payments, and then the focus is on page 115, starting at line 14 and going through line 23.

A. (Document review.)

Q. Did you give -- did I ask you those questions and did you give those answers?

A. Well, I did, yes. Yes, this is an accurate transcription if that's what you're asking.

Q. Now, it's fair to say, isn't it, Mr. O'Shaughnessy, that in assessing the objective merits of a case, it's your opinion that you can only determine within some rough parameters as opposed to

with great precision? Is that correct?

A. Would you please repeat that question?

Q. Is it fair to say that in assessing the objective merits of a case, it's your opinion that you can only determine within some rough parameters as opposed to with great precision?

MR. SCHILDKRAUT: Objection, I think it's ambiguous as to the context of when you're evaluating this case.

JUDGE CHAPPELL: Overruled. I'll let the court reporter read it back and see if he can answer.

THE WITNESS: I think I understand the question.

The best way to determine the outcome is to go to the outcome. Now, cases ebb and flow, and it depends on what stage of the case you're in as to what degree of precision you can have with respect to the likely outcome.

BY MS. CREIGHTON:

Q. It --

A. So, I mean, the merits of the case always inform one's judgment on what's going to happen. The precision with which one can gauge the possible outcome on the merits will change.

Q. Okay. And isn't it, in fact, the case, Mr.

O'Shaughnessy, that as a case ebbs and flows, the odds may change from 60 percent to 70 percent to 50 percent of the lifetime of the case?

A. Well, they will swing that wildly, but they certainly will change with rulings of the court, the discovery of new evidence. It depends on where you are. The closer you get to trial, the less likely you would expect those kinds of wild swings. Early in the case, yes.

Q. Let me direct your attention to page 156 of your deposition, lines 8 to 14. The question, I believe, is actually on page 154, lines 4 to 6. The question was:

"QUESTION: What kind of parameters would you say you think reasonable to achieve in assessing the objectiveness of a case?"

And your answer continues, and in particular at lines 8 to 14, you state, "It -- there are too many things that can happen over the period as the case ebbs and flows, and I may tell my client today we've got a 60 percent chance of winning. After the ruling on a motion, I could say we have a 70 percent chance. And after the next ruling, I could say we have a 50 percent chance. It's on -- there's just too much uncertainty going forward."

Did --

A. I think that's true, that's true, yes, going through the case. As I say, when you get down the road to a jury, that may not be true.

Q. Summary judgment can affect the outcome of a case, correct?

A. It can be dispositive.

Q. And also change your assessment of the odds even if it's not dispositive, correct?

A. Yes, it can.

Q. A ruling on what goes to the jury and what evidence won't go to the jury can affect a case?

A. Yes, it can.

Q. And this can result in wild swings of the assessment of your odds, correct?

A. As I say, earlier in the case you get wilder swings than later in the case. You would hope not to go from a 70 to a 50 percent change as they're swearing the jury.

Q. And even in a case on appeal, you might end up with a 50 percent chance of reversal?

A. That's a whole new dynamic.

Q. And isn't it true, sir, that the less information you have earlier in the case, the less precise you can be in assessing the likely outcome at

trial?

A. I think that's true of almost everything.

Q. Of course, even in cases that have been tried all the way through, you frequently have been surprised by the way evidence has been perceived by fact finders, whether judge or jury, correct?

A. That's correct.

Q. Arguments and evidence that you believe dispositive have been overlooked or have been discounted, and seemingly minor points sometimes carried the day, correct?

A. I have seen that, yes.

Q. Witnesses and their testimony have been disregarded, right?

A. Correct.

Q. And your experience matches that of most litigators that you know, particularly patent litigators, correct?

A. I believe that to be true.

Q. So, as a result of all those uncertainties, you personally can't tell the difference between a 70 and a 75 percent case, can you?

A. Well, I -- in fairness to what we discussed before, I think what I said is there is no substantive difference. It's difficult when you get to a

difference between 5 percentage points, because it's not a probability distribution. It's a -- it's meant as a method of communicating important information to a businessman or businesswoman.

I think it is meaningful to talk about a difference between 60 and 70 percent. When you talk about the difference between 70 and 75, it starts to create a false impression that one can be so precise with one's statistics that you can actually predict the outcome.

The -- maybe a different way to put it, you know, if -- if we talk about a probability when you flip a coin, you know, every time you flip the coin there's some statistical probability it's going to be a head or a tail, or if you're picking socks out of a bag and trying to match them up, there's some statistical probability that they will match. That's not the kind of statistics we're talking about here.

Q. The reason that lawyers and clients talk about statistics of the type you're talking about is really as a communications tool. Isn't that correct?

A. Absolutely.

Q. So, they are not intended to have some kind of mathematical or scientific exactitude, correct?

A. Yes, and I would not want to tell a businessman

you have a 72 percent chance of winning, because a businessman is likely to believe that. The problem is I want to convey that there is a demonstrable, a palpable risk that we could lose here, and 70 to 75 percent, it's hard to tell. I might articulate 70 to 75 percent. I'm not sure the hearer would be able to distinguish between 70 and 75, but I do think it's meaningful between 60 and 70 or between 50 and 60, you can do sort of a rough approximation, and the sort of larger swings or larger differences, say this was a significant event and our chances went from 60 to 70 or our chances went from 60 to 50. It's the significance of the event that you're trying to convey, not the precise outcome statistically speaking.

Q. So, in the hypothetical, I'd like to change the facts a little bit on the hypothetical that Mr. Schildkraut asked you. Suppose that you're a mediator and parties are coming to you to propose settlement, and instead of having to prove that a particular side deal has some specific extrinsic value, instead, you're told that in order to pass muster legally that you have to be able to prove with some exactitude what the odds were of prevailing in a case, that the patent holder had a 62 percent chance of winning.

What effect would that legal rule have on your

ability to settle cases?

A. Well, I don't know how I'd go about trying to prove I had a 62 percent chance of winning, not with that kind of precision.

Q. So, the effect of that kind of rule would be to create considerable uncertainty or to chill settlements, wouldn't it?

A. That would be part of the chilling effect, yes, but all you've done is add to my conundrum. The basic problem I have is not understanding -- I guess it's a double negative, not not understanding my case, the substantive case; it's the failure to appreciate how I would prove that there is no net consideration in the extrinsic value-creating deal, whereas -- there are a lot of moving parts, a lot of money that flows in different directions.

In that example I gave, there was money going from infringer to patentee, money going from patentee to infringer, on various levels for various things, license fees, product discount fees, there was cash, there was script. I can't figure out with all the arrows where the net ultimately is. I can tell you that both sides believed that they netted out positively, that they both ended up with more than they would have had absent the transaction.

Q. Mr. O'Shaughnessy, I just want to make sure you understood my hypothetical, because I was setting aside the one that related to the extrinsic value creation, just a settlement in which to prove that the settlement was reasonable you had to be able to prove up what the true odds were of prevailing in the case. That would have a chilling effect on your ability as a mediator to settle cases, wouldn't it?

A. Yes.

Q. Mr. O'Shaughnessy, you testified during your direct about the use of extrinsic value creation to bridge the gap between parties to settlement.

A. Um-hum.

Q. In your experience, such deals may include instances, for example, if one party trades technology rights in one area in exchange for another party's technology rights in another area, correct?

A. Correct.

Q. So, for example, license to one technology in exchange for a license to another technology, right?

A. Correct.

Q. The reason that you look for such trades is to use something that's leveragable because cash isn't leveragable. Isn't that right?

A. That's correct.

Q. Your first objective in a deal, in fact, is to reduce the cash component as best you can. Isn't that right?

A. That's correct.

Q. It's not always achievable, but that's your first objective.

A. It's always the first objective, because as I said, it's not leveragable.

Q. In fact, you hate to give up cash when you're negotiating because in your opinion it's way too precious to give to someone else, correct?

A. That's correct.

Q. Because cash belongs in the executive bonus pool?

A. I think that's what I told you, yes.

Q. So, if you represent the payer, you're trying to reduce the cash component by using a technology deal instead, right?

A. As best one can, yes.

Q. And is that a view in your opinion that others would subscribe to who are involved in extrinsic value creation?

A. Oh, I -- I believe the answer is yes for the reason that cash isn't leveragable, and if you can create something of value, especially, as I said

earlier, where the party giving the value and the party receiving the value can actually value the transaction differently, where the party giving the value can value it kind of low, because it doesn't cost them a lot to give it, but the party receiving it values it high, because it provides or fills a need that they have, that's an ideal situation.

Cash isn't capable of doing that. Unless you're in like Argentina or someplace like that, you know, the giving and the taking of money can have a lot of value at the time. Here, if I give you a dollar, I've lost a dollar and you've gained a dollar. It's not leveragable. So, I haven't accomplished a lot as a mediator by just throwing cash at the resolution of a deal, the resolution of a problem.

Q. So, just to summarize, it's fair to say, isn't it, that the purpose of using technology side deals in your experience is to minimize the payment of cash, correct?

A. Minimize, yes.

Q. Okay. So, it's not to provide a reason for the payment of cash, correct?

A. I missed your question.

Q. The purpose of using side deals is not to create a reason to pay cash, correct?

A. I -- you would try to minimize it, yes.

Q. You're not an economist, are you, Mr. O'Shaughnessy?

A. No, I'm not.

Q. I think you mentioned that you drew a distinction between what Professor Bresnahan called optimistic and what you've called wildly optimistic litigants.

A. Um-hum.

Q. You also identified what you described as a case of indifference. Is that correct?

A. Um-hum.

Q. But in noting these additional categories, you don't have an opinion as to how these categories would affect Professor Bresnahan's economic analysis, correct?

A. No, I -- I see them in my own practice. They have a profound difference to me in resolving disputes. So, for example, a party within Professor Bresnahan's category of optimistic, who may be like 120 percent combined probabilities of success, I see that almost all the time. It's not uncommon to find a litigator who has worked on their case for several years who has a lot of confidence in it and believes she's going to win and believes that, you know, it may be an almost

two out of three chance, and to find somebody resisting that with an equal degree of conviction that they're going to win. That's the adversarial system.

When we get to something like 130 percent, we certainly have a problem, because now one party is operating with an undue degree of optimism. There's an unrealistic expectation, and for a mediator, that's a very important dynamic to understand. You can facilitate as a facilitative mediator a dispute with about 120 percent. When it gets to about 130 or more, you have to become evaluative.

Q. And I appreciate that, Mr. O'Shaughnessy, but the question is, just to make it clear that you and I are on the same wavelength, you don't have an opinion as to whether that distinction, for example, has any effect on Professor Bresnahan's economic analysis, correct?

A. Oh, I think it must. I don't know how, but I think it must. I mean, how can you talk about the resolution of a dispute with these dynamics and some kind of economic rule that applies to the determination of the legitimacy of the outcome and then factor out one of the most important dynamics within the dispute itself, which has to do with the degree of optimism or over-optimism? So, I can't tell you how it affects,

but I can't believe it wouldn't.

Q. Well, you don't have any opinion as to whether these distinctions have any bearing on the facts of this case. Is that right?

A. No, I do not.

Q. So, so far as you know, these distinctions are irrelevant in the application of Professor Bresnahan's analysis to the facts of this case. Isn't that right?

A. I don't know how they apply to this case, so I couldn't offer an opinion on that.

Q. And in your experience, most parties are optimistic about their litigation odds, correct?

A. Yes.

Q. Few parties even have an equal assessment of their odds in litigation, correct?

A. It sometimes happens.

Q. By equal assessment, you mean an assessment that's objectively accurate. Is that right?

A. I can work with that definition.

Q. Okay. I take it that it's fair to assume, sir, that if equal assessments are rare that you've seldom encountered a case in which a party was pessimistic about its odds?

A. At the outset, yes, not near the end.

Q. Okay.

A. I mean by the end of the process, and you might take advantage and create some pessimism to drive a party to settlement. It's a function of risk aversion.

Q. Okay. Didn't you criticize Professor Bresnahan because you felt that he treated pessimistic odds as some frequent occurrence?

A. Yeah, yeah.

Q. And so you think that an economic analysis that is based on the predicate that pessimism is common would be inappropriate, correct?

A. I believe that to be true, yes.

Q. And that would be as true of economists offered I assume by Schering as it would be offered by complaint counsel, correct?

A. Well, it's not an even distribution amongst these three categories, if you accept that there are only three. People tend in litigation to be more optimistic than pessimistic or they would have settled long before it got there, and what you find is that you can use pessimism and, in fact, turn people on themselves in their own psychology and say, you know, everybody over-values their case. You're just over-valuing your case.

You create at once a sense of pessimism, and you create a heightened sense of risk -- you raise

their risk averse profile, because you're trying to get to done. So, you might exploit it. Now, going into a case at the beginning, you might see one kind of distribution. People change over time. What I'm saying is there's not an equal distribution -- it's not a bell-shaped curve of, you know, optimistic, pessimistic and equal assessment.

Q. In your opinion, the lawfulness of agreements between competitors should be determined without regard to whether that agreement arises in the context of settlement, correct?

MR. SCHILDKRAUT: Objection, this is beyond the scope of the direct examination. It's also beyond the witness' expertise.

MS. CREIGHTON: First, Your Honor, I think that we've been having some latitude in cross examination of experts, but specifically, I think that this goes directly to his criticism of Professor Bresnahan's analysis.

MR. SCHILDKRAUT: I don't think he's criticized Professor Bresnahan's analysis in terms of his -- in terms of Professor Bresnahan's antitrust analysis, and I don't think he's capable of answering questions like this.

JUDGE CHAPPELL: The objection's sustained. If

you're going to ask him this, you can't cross examine him, you can't ask leading questions, and you're going to have to lay a foundation.

BY MS. CREIGHTON:

Q. Mr. O'Shaughnessy, you were not asked to form an opinion about how one would determine whether some component of a settlement was designed to conceal an unlawful arrangement, correct?

A. That's correct.

Q. You hadn't given that matter enough thought to have an opinion at the time of -- that you prepared your report, correct?

A. Well, at the time I prepared my report, all I had looked at was Professor Bresnahan's report. I didn't have any facts that would allow me to answer anywhere -- anything along those lines.

Q. And so to the extent that Professor Bresnahan's analysis is intended to determine the lawfulness of agreements that arise in the context of a settlement, you're not expressing an opinion on that one way or the other, correct?

A. I believe that's correct as you phrased it.

Q. And you have no opinion as to whether the arrangements involved here have any anti-competitive effect, correct?

A. That's correct.

Q. At the time you prepared your report, Mr. O'Shaughnessy, the only documents that you had reviewed were the Bresnahan report, the complaint, the answer and the two settlement agreements. Isn't that correct?

A. I believe that's correct. It's outlined in my report. I don't recall anything else, though.

Q. By the time your deposition was taken in this matter, you still hadn't reviewed any of the parties' documents other than the two settlement agreements, correct?

A. That's correct, and that remains true today.

Q. By the time your deposition was taken, you still hadn't reviewed any deposition transcripts other than to look at the Hoffman transcript and decide you weren't interested in it. Is that correct?

A. No, I looked at I think -- I can't remember the order now. It could be that at the time of my deposition, that could be correct, but I have read Professor Bresnahan's deposition, though I did not -- no, I read Bazerman's deposition and I read Fliesler's deposition.

Q. Those were subsequent to your deposition. Is that right?

A. Okay, that could be.

Q. You did not rely on specific terms of the settlement agreements in formulating your opinion, correct?

A. Correct.

Q. In preparing your report, you didn't consider the report, for example, of the fact that ESI -- that the ESI settlement agreement provided for larger payments depending on the timing of ESI's approvable letter, correct?

A. That did not -- I did not take that into account in my opinion, no.

Q. And you didn't focus or rely on any other specific terms in the settlement agreements in forming your opinions in this case, correct?

A. That is correct.

MS. CREIGHTON: No further questions, Your Honor.

JUDGE CHAPPELL: Anything further?

MR. SCHILDKRAUT: Yes, just a few questions, Your Honor.

REDIRECT EXAMINATION

BY MR. SCHILDKRAUT:

Q. Mr. O'Shaughnessy, you have seen cases where the -- where one or more of the parties was pessimistic about the outcome?

A. Well, I've created pessimism if that's what you're getting at. It -- and that's a -- I think a fairly classic technique that mediators use.

Q. Okay. Now, in -- you were asked about providing cash. Have you been involved in matters where net consideration has flowed in both directions?

A. Yes.

Q. And in any of those matters, was there cash flowing?

A. There was cash flowing, there were rights flowing. These can become very intricate, multi-component, a lot of moving parts, as I said earlier, involving cash, involving rights, involving cooperative relationships, which eventually turn to cash.

Q. And that can be in return for a license, for example?

A. Yes.

Q. You were asked some questions about the odds of litigation, and I think you -- the odds of -- the odds of litigation, whether if that was the rule, whether that would be difficult for people to evaluate, and I think you started an answer about it wasn't just the odds of litigation that people had to evaluate but the -- how this -- how to handicap also how to -- you

know, how to evaluate the issue of whether it's going to look like net consideration to the FTC.

A. Um-hum.

Q. And I wanted just to continue and get your full answer on that. How is that going to have an impact on the ability to settle?

A. Well, I see these as two related problems. They're related in the sense that the settlement of the dispute is just a prelude to the next proceeding, where now I have to prove a number of things, and it may be I need to prove with precision what my view was in the prior litigation of my likelihood of success, but in addition to that, I now have to present a lot of evidence on the bona fides of the extrinsic value-creating transaction, and the problem I see with this, apart from the problems of proof and the problems of how that proof may be analyzed and reviewed in the cold light of day, in a room like this several years later as opposed to the caldron of negotiation, which after many hours gets pretty hot.

Those perceptions will be materially different from the reality, and when you rely on risk aversion to drive parties together to settle their dispute, you have to accept them as they are, and they're going to be risk averse enough that they may say, I don't know

how that's going to play out in the second proceeding. I just can't take the chance that I'm going to win here and lose there. So, let's just keep going. No settlement. That's what I predict.

Q. And how is that going to affect your ability to mediate disputes?

A. Very few disputes would be settled if that were a requirement. It would, as I said, chill them. It would thwart many. It would make some impossible. It would be unwelcome by mediators, I can tell you that.

MR. SCHILDKRAUT: No further questions, Your Honor.

JUDGE CHAPPELL: Recross?

MS. CREIGHTON: Nothing further, Your Honor.

JUDGE CHAPPELL: Thank you, sir, you're excused.

Let's take our morning break. We're in recess until 11:20.

(A brief recess was taken.)

JUDGE CHAPPELL: Next witness?

MR. SCHILDKRAUT: Your Honor, Schering-Plough calls Robert Willig.

JUDGE CHAPPELL: Raise your right hand, please.

Whereupon--

ROBERT WILLIG

a witness, called for examination, having been first duly sworn, was examined and testified as follows:

JUDGE CHAPPELL: Thank you, have a seat.

THE WITNESS: Thank you.

MR. CURRAN: Your Honor, Mr. Gidley will be responsible for this witness for Upsher-Smith.

JUDGE CHAPPELL: Thank you.

State your full name for the record, please.

THE WITNESS: My name is Robert Willig, W I L L I G.

JUDGE CHAPPELL: Thank you.

DIRECT EXAMINATION

BY MR. SCHILDKRAUT:

Q. What is your profession?

A. I'm an economist.

Q. Where did you complete your studies in economics?

A. I got my Ph.D. at Stanford University. I got a Master's Degree also from Stanford University in operations research, and a Bachelor's Degree in mathematics but with some study of economics, as well, at Harvard.

Q. And what are your areas of expertise within the field of economics?

A. Within economics, my principal area of

expertise is the field of industrial organization. I have also done research and studied all of my professional life the field of welfare economics, and I like especially to put the two of those together and study policy in the area of what you might call antitrust economics, and also more broadly in the area of government business relationships.

Q. What is industrial organization?

A. It's a major field of economics that has to do with the way, naturally enough, industry is organized, that's why it takes on that title, unimaginatively. It has to do with the form that commerce takes in a variety of different societies, a variety of different contexts, with particular attention to what should we be doing as an economic policy community about the way industry is organized for the public good.

Q. Is there a relationship between industrial organization and antitrust economics?

A. Yes, antitrust economics is that particular focus within industrial organization that focuses on policy in the area of competition, as the rest of the world calls it, and what we call here in the U.S. antitrust.

Q. And what is welfare economics?

A. Welfare economics is the study of what is good

or bad from the point of view of society. We seek to develop philosophical, methodological and practical tools that would help the economic analyst understand whether some change or whether some policy is actually favorable from the point of view of society or not.

Q. Where are you employed?

A. I'm employed at Princeton University.

Q. And what is your position at Princeton?

A. Professor of economics and public affairs.

Q. And what department are you in there?

A. My appointment is joint between the Economics Department and the Woodrow Wilson School of Public and International Affairs.

Q. What is the Woodrow Wilson School?

A. The Woodrow Wilson school is a department of the university. It's also at the same time a professional school within Princeton University. We educate undergraduates who are at Princeton University as college students. We also have a -- what's to me a very important professional program offering a Master's in public affairs for students who are bound for careers in government and dealing with public policy through nongovernmental organizations. The school also offers its own Ph.D.s, as well.

Q. How long have you been at Princeton?

A. I've been at Princeton since 1978.

Q. What courses do you teach?

A. Right now I'm teaching a course in competition policy. It's called Legal and Administrative Regulation of Markets, which I teach to the Master's candidates within the public affairs program in the Woodrow Wilson School. I've taught that same group of students in the fall a course in microeconomics for public policy analysis. I also occasionally teach courses in industrial organization as a matter of theory, as a matter of econometric practice, usually to Ph.D. students in the Economics Department.

Q. What additional positions have you held relevant to your work in industrial organization, antitrust economics and welfare economics?

A. The first job I had out of graduate school was definitely in that category. I was an economic researcher and then later supervisor in the economics research department of Bell Laboratories. Interestingly, at that time, the issues facing the telephone system were just as importantly regulatory as they were electronic, and Bell Labs built a research capability in that field, and it was exciting to be there in those days.

Later on, in 1989-1990, I served in the

administration as Deputy Assistant Attorney General for economics within the Antitrust Division of the Department of Justice just down the block.

Q. And what was your role as Deputy Assistant Attorney General for economics?

A. There were many roles. I'd say the most important was to help in the formulation of policy toward competition for the entire administration. I did wander outside of the building down Pennsylvania Avenue to become involved in the entire administration's thinking about policy toward competition in a variety of domains. I suppose almost equally important was providing whatever advice and guidance I could on the decisions that the Division made with respect to investigations and ultimately prosecution under the antitrust laws.

I also was managing personally the group of 50-some odd Ph.D. economists and finance experts employed by the Antitrust Division to help with the lawyers and the economists performing the tasks of making judgments about what cases to bring and actually fashioning the cases that the Division decided to bring.

Q. What was the objective of the Division's policy?

A. Well, from my point of view, and I think most of my colleagues, the objective was to foster competition, to foster social welfare, to foster consumer welfare.

Q. What do you mean by "social welfare"?

A. This is a long philosophical question, but the bottom line is social welfare is that which we understand to be good policy, good outcomes for society viewed broadly, taking into account consumers, first and foremost, and also taking into account the other interests in the economy.

Q. Did you evaluate horizontal restraints of trade?

A. Yes, that was certainly part of our portfolio of analyses to do.

Q. In your fields of specialization, how many publications have you authored?

A. I've written about 75, maybe more, articles, papers, portions of books and books.

Q. And can you give us some examples of the books you've authored?

A. Yes. My first was called The Welfare Analysis of Policies Affecting Prices and Products, so that went right to the subject matter that we've been discussing. I was a co-author of a booked called Contestable

Markets and the Theory of Industry Structure. I'm also the co-editor of a two-volume set called The Handbook of Industrial Organization.

Q. Can you give us some examples of articles that you've authored?

A. Sure. I wrote an article called, "Consumer Surplus without Apology," still my favorite title. I wrote that a long time ago. Another work would be "Free Entry and the Sustainability of Natural Monopoly." A third, which I was just talking about yesterday, is called, "Merger Analysis: Industrial Organization Theory and Guidelines."

Q. Where were you talking about it yesterday?

A. I was at an antitrust conference at the Conference Board in New York, and the lunchtime panel, sitting next to Bob Pitofsky, talking about the role of concentration in merger analysis, looking back since the original guidelines and looking forward to the next millennium and whether the challenges that are being mounted to the traditional view of concentration are really warranted or whether we have the right framework in place for going forward even though it is a new century.

Q. Have you testified as an expert witness in the fields of welfare economics, industrial organization

and antitrust economics?

A. I have. I've testified before courts, before many administrative agencies, before Congress, before courts in foreign countries, also administrative agencies elsewhere.

Q. Have you done any analysis in the field of economics and intellectual property?

A. I have. I was asked to write an article reviewing the intellectual property guidelines that were published by the Federal Trade Commission and the Department of Justice jointly some years ago, and I was asked to review them and write a review article about them for a Bar association magazine.

I've also done a number of theoretical economics analyses dealing with intellectual property in the economics literature, and I've been involved in a number of consulting matters or applied economic matters where intellectual property was very much at the center of the issue.

MR. SCHILDKRAUT: Your Honor, we offer Professor Willig as an expert in industrial organization, antitrust and welfare economics.

MR. GIDLEY: No objection.

MS. CREIGHTON: No objection.

JUDGE CHAPPELL: Motion is granted.

BY MR. SCHILDKRAUT:

Q. Professor Willig, what was your assignment here?

A. I was asked to determine on the basis of economics whether agreements to settle patent disputes that involve a split of the patent are necessarily harmful to social welfare.

Q. And you said "a split of the patent." What do you mean by "a split of the patent"?

A. The kind of split that I focused on has to do with the split of the remaining time in the life of the patent. In other words, if the patent has ten more years to run and if the agreement to settle the patent dispute would permit entry by the accused infringer of the patent and that entry is sometime in the middle of the remaining patent life, and that would be an example of a split of the patent the way I used the term.

Of course, the split could be along other dimensions as well. For example, patents often can be divided into various fields of use or even different geographical areas over which the patent would apply, speaking as an economist not as a lawyer, and I think the basic framework of the analyses that I've done can apply as well to those dimensions of the applicability of the patent as well as to time, but still, in my

report, my focus has been on time.

Q. Okay. Did we finish your assignments? Do you have any other assignments?

A. Yes.

Q. Well, were you actually -- were you asked to assess the actual welfare impacts of the particular deals in this case?

A. No, I was not actually asked to do a factual analysis of these examples of patent-splitting agreements or of these deals to arrive at a conclusion about them. Instead, I was asked to focus on the issue of methodology, how is it that an economist would advise the policy community or the fact finder about how to decide whether a particular agreement really is in the public interest or whether instead it is anti-competitive, and in that respect, I was asked to review the work in this case by a Professor Bresnahan, who I think from his testimony and his reports has a very definite viewpoint on that issue of methodology, and that's really been the focus of my work, was to test that methodology.

Q. Were you asked to review all the record testimony?

A. No, I was not.

Q. What were you asked to review?

A. I focused almost entirely on the testimony of Professor Bresnahan for the reasons that I just mentioned.

Q. Okay. Were there any assumptions you were asked to make before analyzing these issues?

A. Yes. The first assumption that I was asked to make was that the first leg of Professor Bresnahan's three-leg test is satisfied in this case as a matter of fact, not that I know those facts, but I was asked to assume that the fact finder would agree with Professor Bresnahan's first leg of his test with respect to the existence of monopoly power.

Q. You were asked to assume that Schering was a monopolist?

A. I was asked to assume that for the purpose of my analysis, to focus on the methodological issue instead.

Q. Anything else you were asked to assume?

A. Yes. I was also asked to assume the second leg of Professor Bresnahan's test; namely, that that monopoly power that I just mentioned I am assuming is actually threatened by the potential of the possible entry into the marketplace of the litigating entrant who is part of the patent dispute. So, threat to that monopoly power.

Q. And what were you asked to assume about net consideration?

A. I was asked to assume that the question of whether there is a side deal, an extrinsic deal as part of the agreement to settle the patent dispute, that whether or not that side deal involves net consideration is a matter of contention. I was not asked to assume it was either there or not there, but rather, that it's a real issue in the case.

Q. What do you mean by "net consideration"?

A. Net consideration would be payment of cash, money or other value beyond the value that is received by the party who was conveying that cash or that value, and that moreover, that cash or value that is conveyed is received by the counter-party.

Q. Okay. Let's very briefly have you state your conclusions. What conclusions did you draw?

A. Different conclusions about the three different kinds of patent-splitting agreements that I considered using economic analysis. First, from the point of view of a very simple patent-splitting agreement which has no side deal at all, it's just an agreement to split the patent. My conclusion is that agreements of that kind generally raise no significant issues of competitive concern and that the general policy stance

ought to be nonintervention in agreements of that kind.

Second, with respect to patent-splitting agreements that do entail side agreements or extrinsic agreements, even though they may be linked to the settlement of the patent dispute, my conclusion with respect to them is pretty much the same as the conclusion that I just articulated. Generally those kinds of agreements do not raise systematic issues of concern about competition or about social welfare.

However, there is a difference that I think is worth noting, and that is the side agreement that's part of the patent-splitting agreement in its entirety that settles the patent dispute can very well have a special benefit to policy because the ability of the parties to link a side deal to the principal arrangement that settles the patent dispute can, in fact, be socially beneficial. It can help to facilitate the arrival at an agreement that disposes of the patent dispute, and from the point of view of society, that's a good thing.

Q. What about your conclusion regarding the patent-splitting arrangement with a side deal with net consideration?

A. Settlements of patent disputes with side deals that do -- have been found to convey net value can, in

fact, be essential in order for the parties to settle the patent dispute in the first place.

Moreover, there are circumstances where when the side agreement that conveys net consideration -- when it is necessary to reach an overall agreement, that agreement, supported by the net consideration, can very much be to the benefit of social welfare. It can help consumers as well as being beneficial for the parties.

Q. Before I ask you more about your specific conclusions, you've been talking about settlements, and from the point of view of economists, are there -- what are the -- what is the social welfare impact of settlements of intellectual property and other legal disputes that are in litigation?

A. Well, there are a few different effects to pay attention to. First and foremost, a settlement of a patent dispute removes the burden of risk that is endemic if the litigation were to go forward from the parties to the dispute, removes the cost of bearing the inevitable risk that attends patent litigation from the parties, and that has a few elements to it, also. But moving on to broader concerns, judicial resources are always scarce, and I think it's a general precept of economics and policy generally that there is social

good to conserving scarce judicial resources, and policy that will help to facilitate the ending of disputes, of litigation disputes through settlements, has a social benefit all by itself for that reason alone.

Q. You mentioned the cost of bearing risk. Is that the same thing as risk aversion?

A. Risk aversion is the term that we use in economics to describe the kinds of preferences that make it costly for a party to bear risk. So, the costs of bearing risk come from risk aversion.

Q. What are the costs of bearing risk?

A. First and foremost, at the personal level of just individual people, bearing risk is uncomfortable, and people are known to be adverse to risk because it just makes them worry about the downside, and the downside is more negative to them, to us. It's almost a universal thing about people, including me certainly and you, I would warrant, that the downside is actually worse than the upside is good, and so on net, bearing risk that has two sides to it, which is what risk is about, is something that people would seek to avoid, and we label that urge to avoid such risk at a personal level risk aversion.

From the point of view of a corporation, risk

aversion comes in part from the effects that I was just describing. Corporations are people with managers who are human, shareholders who are human, but at the same time, from the point of view of the corporate interest, there are separate reasons to understand risk aversion, because the more risk that a corporation bears, the higher is its cost of capital. The investment community, Wall Street, understands that risk is something that requires more return to compensate for, and so a firm has a higher cost of capital when it's bearing more risk.

Higher cost of capital is a cost of doing business that raises prices, it deters investment, slows down investment, has a number of business impacts that are on the negative side both for the business itself as well as for the economy that surrounds the business.

Q. Let's talk about your first conclusion, which was relating to a patent-splitting arrangement without a side deal. Tell us, why did you conclude that such a patent-splitting arrangement without a side deal poses little or no risk of social harm?

A. Well, on the benefit side, as we were just describing, the settlement of the patent dispute removes risk from the parties, and so that's a good

thing in itself. It also helps to conserve judicial resources. That's a good thing in itself. And on the other side of the ledger, it carries little general risk of impeding competition.

Q. And why does it bear little general risk of impeding competition?

A. It's not generally likely to create more monopoly than would the alternative process of litigation that the settlement tends to displace.

Q. But in splitting the patent life, aren't the litigants dividing the market?

A. They are not dividing the market in the sense of creating any more monopoly or any less competition than would be the result in a probabilistic sense under litigation. If the litigation goes the way of the incumbent patent holder, then that patent holder will have the extra monopoly -- again, under the assumption that there is monopoly in the first place -- as a result of winning the patent dispute.

Of course, that kind of monopoly that we're talking about is the kind of monopoly that an economist labels as socially appropriate; the law -- I hesitate to speak about the law -- but the law might find lawful, because it's monopoly that flows from the conferral of the property rights inherent in the

patent. This is not bad monopoly; this is good monopoly in the first place.

Q. Okay, let's go to tab 1 and page 43, and this is complaint counsel's trial brief, and I want to focus on a sentence there that is in the middle paragraph, one sentence from the end, and I'm going to read part of that sentence.

A. I'm sorry, what page?

Q. Page 43. The sentence starts, "This case," one sentence from the end in the middle paragraph on the page.

A. Mr. Schildkraut, I don't have it. Page 43?

Q. Page 43.

A. Ah, thank you.

Q. Okay, let me read it to you. This is from complaint counsel's brief.

"This case does not challenge the settlement of patent disputes by an agreement on a date of entry, standing alone."

Do you agree with complaint counsel's decision that such conduct should not be challenged?

A. I do agree with that.

Q. All right. Let's now go to the second conclusion, which was an agreement that is accompanied -- an agreement that is accompanied by a

side deal without net consideration, and could you -- you say a side deal. Is this a side deal that's for fair value?

A. I'm reading the sentence. "This case does not challenge the settlement of patent disputes by an agreement on a date of entry, standing alone, or the payment of fair market value in connection with 'side deals' to such an agreement."

Yes, so here the document is speaking about side deals that do not convey net consideration, even though they are linked to the settlement of the underlying patent dispute.

Q. Okay. Why did you conclude that a settlement with a patent split that has a side deal without net consideration poses little or no harm of social welfare?

A. Well, like splits of patents to settle patent litigation that have no side deals at all, there are real social benefits to the settlement of the patent dispute in and of themselves. The fact that there is a side deal that's linked, given that the side deal has no net consideration entailed in it, means that the side deal raises no additional risks of harm to competition or the creation of more monopoly, and moreover, there's the extra good that the side deal may

actually help to facilitate the attainment of a settlement at all, and that has its own social benefit going along with it.

Q. Is there any additional general risk of increased monopoly compared to litigation in this sort of patent-splitting arrangement?

A. No, there's not.

Q. And you've now read the second part of that sentence, we're still on page 43. Do you agree with -- basically with complaint counsel's position here, "This case does not challenge the settlement of patent disputes by an agreement on a date of entry, standing alone, or the agreement (sic) of fair market value in connection with 'side deals' to such an agreement"?

A. I think you misspoke if it matters, "or the payment of fair market value"? I just had a chance to read along here.

Q. Yes, "or the payment of fair market value in connection with 'side deals' to such an agreement."

A. I think that's a wise decision by complaint counsel, which here is consistent with good public policy.

Q. Let's put up on the screen tab 15, I believe. This is Professor Bresnahan's testimony, and I think we've heard this before, but I wanted to get your

opinion about it, so we're starting at -- we're at 1021, we're starting at line 7, and I'm going to go to line 21.

"QUESTION: Now, let's say life isn't so simple and the parties say we want one global deal tonight and we want to get this settled. Are you telling me that Schering-Plough needs to do some kind of ordinary course of business assessment of the licensing in order to be safe with this valuation calculation, sir?

"ANSWER: In order to be safe? I would -- you asked me this question in deposition, and I answered it as I just answered it. If you wanted to be safe, the thing to do would be break the linkage."

Let me stop right there and ask you, if Professor Bresnahan is correct that litigants could only be safe by negotiating patent settlements without a side deal, what would be the impact on these sort of deals?

MS. CREIGHTON: Objection, Your Honor, misstates the witness' testimony.

MR. SCHILDKRAUT: Well, let me rephrase the question.

JUDGE CHAPPELL: Okay.

BY MR. SCHILDKRAUT:

Q. If Professor Bresnahan is correct in what he

stated here, how would that -- how would that -- what would the impact be of that on social welfare?

MS. CREIGHTON: Objection, Your Honor. I think that the question -- the linkage of due diligence as a predicate to entering into a settlement is beyond the scope of what Dr. Willig has opined on in his report.

MR. SCHILDKRAUT: No, Dr. Willig opined in his report on exactly I think this issue, which is what we're talking about now, which is whether patent-splitting agreements are a good thing if they have side deals. So, now we're asking -- now what we're asking Dr. Willig is if the patent-splitting agreement -- what we're asking him is what is the welfare impact if you're not -- if you can't be safe doing such agreements?

MS. CREIGHTON: Well, respectfully, I think the question asked whether or not there was some concern about whether you could enter into a deal tonight without doing any due diligence and knowing anything about the properties that were being exchanged, and I think the answer was that -- as he stated, but that's a quite different thing from the question of whether or not you can enter into side deals.

MR. SCHILDKRAUT: Well, let me -- rather than argue this, let me rephrase the question.

BY MR. SCHILDKRAUT:

Q. Professor Willig, if you can't be safe doing side deals without net consideration in trying to settle a patent dispute, what kind of social welfare impact would that have?

A. I think there would be a negative impact on social welfare if the opportunity to link side deals to agreements that would settle the principal patent dispute were somehow chilled, suppressed, made less likely, made more dangerous as a result of a competition policy that were put into effect by an agency such as this one.

Q. What impact would that have on people's degree of certainty?

A. If the parties to an underlying patent dispute who were attempting to reach a settlement of that dispute found themselves in a position where it were dangerous for them to link a side deal, whether or not they think it involved net consideration, because of legal problems that they feel might afflict them if they took that step, it would make it harder for them to reach a settlement of the underlying litigation, and that means that they, as enterprises, would wind up bearing more risk.

It means that our judicial system would wind up

with more litigation that could otherwise be adverted if there were different policy about side deals with or without net consideration.

Q. Let's go now into your next conclusion. That relates to patent-splitting agreements that are accompanied by a side deal with the payment of net consideration to the patent holder. What is your conclusion relating to such -- to such arrangements?

A. My conclusion is that it would be a real mistake to prohibit them, because side deals linked to settlements of patent disputes where there is net consideration, where there's a finding of such net consideration, even where that is clear, can very well be essential in order for the parties to be able to settle their underlying dispute at all.

Moreover, my analysis shows that some of the settlements that can be attained through linking a side deal with net consideration to the settlement of the patent dispute can, in fact, be socially desirable for all concerned, both the parties and assuredly consumers as well.

Q. Okay. What is your understanding about the nature of Professor Bresnahan's concern about such arrangements?

A. Professor Bresnahan reaches the opposite

conclusion. He seems to assert -- he does assert that the mere finding of the payment of net consideration in a side deal that is linked means necessarily that consumers are harmed by the entire settlement.

Q. Okay. And how does he -- how does he determine -- why does he determine that the outcome of that settlement is worse than the outcome of litigation?

A. The starting place for his analysis is his view that the reservation time for the entry of the litigating entrant as viewed by the incumbent is right at the mean time of entry under litigation. That's really his starting place. If I had a demonstrative, perhaps I could point to it.

Q. We will go into that fairly soon.

Are you both comparing the same thing in terms of looking at the social welfare impact? And I mean by that, are you comparing the date of entry under settlement with the likely date of entry under litigation?

A. Yes, Professor Bresnahan is reaching his conclusion on the basis of a comparison between the entry date under the settlement as compared to the mean probable entry date under litigation.

Q. What do you mean by "mean probable entry date"?

A. Well, under litigation, there is no sure thing. There's the possibility of a very early entry date if it is the -- excuse me, the litigating entrant who prevails, who were to prevail in the patent dispute, and that has some likelihood attached to it. And on the other hand, if the incumbent patent holder were to prevail, then the entry date would be delayed until the end of the patent life, and that has some probability attached to it.

When I say the mean probable entry date under litigation, what I'm talking about is the average, the weighted average of those two dates, taking into account those probabilities, which I like to talk about under the rubric of the underlying merits of the patent dispute, which in my model comes down to the comparison of these probabilities to each other.

Q. Now, if you're comparing those two things and Professor Bresnahan's comparing those two things, where do you differ with Professor Bresnahan?

A. Well, let me say first of all that while our basic approach in this regard is very much in sync with each other, in my own work I try to focus on the consumer perspective, on the mean probable date of entry under litigation, and there are some of my analyses under which that's actually significantly

different than simply the probabilistic -- the statistical version of that same mean. And Professor Bresnahan doesn't incorporate those kinds of factors in his analysis, so there we use this construct in somewhat different fashions.

Q. And I think you were saying that net payments do not always have an adverse social welfare effect. Is that right?

A. That is right.

Q. Okay. Then why is Professor Bresnahan wrong in thinking that net payments always have such an effect?

A. You say why is he wrong or is he wrong?

Q. Is he wrong?

A. He is wrong, yes.

Q. And why is he wrong?

A. He's wrong because his formulation, his analysis, leaves out a number of elements of the context which I think are relevant or even endemic to situations of this kind, and people who do economic analysis always have to leave something out. We're just doing models. But in this instance, the elements that Professor Bresnahan chose to omit from his analysis actually swing the conclusions rather drastically.

Q. You mentioned earlier a reservation date. What

is a reservation date?

A. I mean by that term -- the reservation date for the patent-holding incumbent is the earliest date at which the incumbent would be willing to come to an agreement for the entry of the litigating entrant.

Q. Okay, I'm going to ask you to try to illustrate this using a chart.

Your Honor, may the witness go to the easel?

JUDGE CHAPPELL: Yes, he may.

THE WITNESS: Thank you.

BY MR. SCHILDKRAUT:

Q. Okay, we're looking at tab 17. This is SPX 2332, demonstrative for identification, and looking for the Cash-Strapped Generic.

A. Who's doing my blocking?

Well, this is a picture that is one of a sequence that I hope to have the opportunity to use, and so it's worthwhile for me to explain some of the basic elements of the demonstrative.

Q. Why don't we start with the yellow line on the demonstrative. What is that?

A. Let's start with the yellow line on the demonstrative. This is the time line. The time line begins at the time when settlement negotiations are taking place. This is the beginning of the frame of

time that's being pictured here. The end point of the yellow line is the time that corresponds to the end of the patent life. So, this is a portrayal of the time line that holds the action for the analysis.

Q. I think, Professor Willig, I can barely read it from there even though we blew this up. Maybe we can move this forward a little. That may be a little more helpful.

Okay, to illustrate the point you want to illustrate, what else do we need to identify on this demonstrative?

A. This line here signifies the time that is the probable date of entry under litigation. It's that statistical average from the consumer's perspective that I was just explaining. It's literally the mean of the time when the entrant would be permitted and actually be able to function in the market were the entrant to prevail in the patent litigation, mixed in, in the sense of an average, with the time when the entrant would be able to come in were it the case that the patent-holding incumbent were to prevail in the patent litigation.

So, it's sometime in the middle, and how far it is as between the two end points of the time line depends upon the merits of the underlying patent

litigation. Here, it's drawn somewhere in the middle, reflecting something like a 50/50 or a 60/40 probability of the patent suit going one way or the other. So, it's a marker.

Q. What about the "Consumers Prefer These Settlements to Litigation," what does that box mean?

A. Well, the box just holds the logo. The arrow actually displays the different times when entry might be allowed under various possible settlements, and the arrow shows the set of those times that consumers would prefer to litigation. Notice that the arrow runs up to the mean probable date of entry under litigation, because that's the mean, the average time of entry, that consumers would have to their benefit under litigation, so any earlier time would be preferable for consumers in this particular formulation.

By the way, that won't always be the case in other forms of this analysis, but for this one, this is indeed the case.

Q. What about the I guess pink box on the top, do we need that to illustrate the point?

A. Well, the pink box illustrates the settlement entry dates that the incumbent will be willing to settle for, again, as against the backdrop of litigation. As drawn here, the arrow labeled with the

pink box shows all of those times that the incumbent would prefer or be indifferent to as compared to litigation, but this is not the right location of the arrow under Professor Bresnahan's formulation.

Q. Well, first, why does the arrow go past the mean probable date of entry under litigation?

A. In this display, as the box tries to remind us, because of risk aversion or other litigation costs that are experienced by the incumbent, were litigation to go forward, the incumbent is willing to give up some time relative to the mean probable date of entry under litigation in order to have a settlement. A settlement conveys benefits to the incumbent, avoiding the risk and avoiding other litigation costs, and that's why in this display the arrow moves to the left of the mean probable date.

Q. Okay. Now, you began to mention how Professor Bresnahan would view this.

A. Right --

Q. Can you tell us --

A. -- and in Professor Bresnahan's analysis, this line, which depicts the acceptable settlement entry dates for the incumbent, never goes to the left of the mean probable date -- at the risk of --

Q. We've got others. Go ahead.

A. Okay. Instead, for Professor Bresnahan, the arrow ends right there, so this part does not apply, and for his analysis, at least the way he reaches his conclusion, it's always the case that the incumbent's set of acceptable entry dates ends right at the mean probable date.

Q. And you mentioned the word "reservation date." What does this analysis have to do with the reservation date?

A. The reservation date is just I think a helpful term that applies to for the incumbent the left-hand side of the arrow, what is that date. That's the earliest date at which the incumbent will accept entry in the context of a settlement.

Likewise, just to get it off my chest, we can talk about the reservation date for the generic, the litigating entrant, as well, and from the point of view of the litigating entrant, the reservation date is the right-hand side of that arrow, the arrow that applies to the entrant.

Q. Now, is it the risk aversion that's affecting the entry date -- excuse me, the reservation date?

A. For the incumbent, it's the combination of litigation costs and risk aversion.

Q. Okay.

A. Either of those will pull it to the left.

Q. Why don't you go back to your seat, and I'm going to ask you some more questions on risk aversion.

Let's put up tab 2 on the screen. This is some testimony from Professor Bresnahan at 1150 of the transcript, and we're going to be looking at line 9 through line 18.

A. Tab 2?

Q. Tab 2, yes, line 9 through line 18. Do you see it there?

A. Yes.

Q. Okay, let me read it then.

"QUESTION: Okay. Do you want to give us the other definition while we're at it?

"ANSWER: Sure. A person is risk averse if they would turn down a fair bet against something that had the same expected pay-off. That's what I mean by a 'fair bet.'

"QUESTION: And to finish that thought, would a risk averse person take a more certain amount of money that was lower than the value of the fair bet?

"ANSWER: Yes."

Do you agree with that definition of risk aversion?

A. That does agree with my definition. There's

obviously different ways to articulate it, but I think that way is accurate.

Q. Let me ask you about insurance policies. Is insurance policies a fair bet?

A. It depends upon how well you shop for your insurance policy. We like to think that in a competitive insurance market that the proffer of the policy is a fair bet in the sense that you're not charged any more for the policy than is the expected value of the risk actually worth to the company.

Q. And how does -- how does -- what is the -- how does the insurance policy affect the bearing of risk?

A. Right, so I buy -- economic agents buy insurance policies so as to offload the risk of the underlying loss from their own shoulders and move it over to the insurance company. So, if, God forbid, my car should blow up and I lose the $20,000 value of the car, if the insurance agent is doing her job, then I'd call her up and say, my car blew up, give me a new car tomorrow, or $20,000 would be just fine, thank you, and hopefully the insurance company will make good its promise.

So, therefore, even without my car actually blowing up, the risk that my car would blow up is not on my shoulders. It has been taken off my shoulders by

the insurance company.

Q. Are you familiar with the term "risk premium"?

A. Yeah.

Q. Can you define that for us?

A. Yes, the risk premium is the most I would be willing to pay to offload the risk. So, it's not the same as the insurance premium, because that's what the insurance company is requiring that I pay in order to offload the risk onto them, but the risk premium is the value to me of getting out from under the risk.

Q. Okay, let's talk some more about risk aversion.

How does risk aversion affect the investment that managers are willing to make for their companies?

A. A manager who is risk averse or whose company is risk averse tries to fashion investment decisions in a way that takes cognizance of the risk and tries to avoid unnecessary risks, trading off risk and return. The manager will understand that an investment that has a riskier posture than some other investment is for that reason alone less valuable, and so it needs a higher expected return, putting the risk aside, in order to compensate for the additional risk.

Q. Can risk aversion result in less investment?

A. Risk aversion certainly does result in less investment, because the aversion to risk itself causes

the firm to step away from investments that it might otherwise make, but in the corporate environment, the most direct interaction, at least at some level of perspective, is the cost of capital to the corporation, and the riskier is the posture of the corporate holdings, the higher is the cost of capital, and if the cost of capital is higher, then investment becomes less desirable.

At the same time, even apart from the cost of capital, if the outcomes in the applicable portion of the company's business are uncertain, then that's an extra reason for the company, first of all, to wait, to delay investment until some of the uncertainty clears, and second of all, the company that doesn't entirely wait -- and it's not always the right thing to do to wait until all uncertainty clears, uncertainty never fully goes away -- mistakes are going to be made as a result of the risk, because you don't correctly always foresee the future.

The riskier the future is, the more likely you are to misjudge and therefore make the wrong investment decision today as a result of that risk.

Q. How common is risk aversion?

A. I think risk aversion is generally prevalent both among individuals and among corporate institutions

in their decision making.

Q. Let's turn to tab 4, put some passages up on the screen. The first one is from Paul Samuelson and William Nordhaus. Who is Paul Samuelson?

A. Paul Samuelson in some ways is one of the originators of modern economics. He's one of the first Nobel Laureates in the field, and, of course, his Econ 1 textbook was almost universally read by 30 years of econ students.

Q. Let me read it to you.

"People are generally risk averse, preferring a sure thing to uncertain levels of consumption; people prefer outcomes with less uncertainty and the same average values. For this reason, activities that reduce the uncertainties of consumption lead to improvements in economic welfare."

Do you agree with that?

A. Yes, I do.

Q. And how do they lead to improvements in economic welfare?

A. For all the reasons that we've been talking about. This is -- reducing uncertainties means reducing risk, and that has all the beneficial elements that we've been discussing.

Q. Okay, now I'd like you to turn to tab 3, and

how common is risk aversion within companies?

A. I think the general presumption is that there is risk aversion underlying the decision-making of most companies.

Q. Okay, let's look at the second quote on the page from Frederick Scherer. Who is Frederick Scherer?

A. Ah, Frederick Scherer, he's a very well-known industrial organization economist who in some sense is also one of the founders of the modern field of industrial organization. His textbook also was read by many generations of scholars in industrial organization to this day. He was a chief economist at the Federal Trade Commission for a while, well-known consultant, very long list of important articles in the field.

Q. Okay, let me read you his quote.

"Only the decision maker who attaches no significance whatsoever to avoiding risk will always choose alternatives with the highest best-guess payoffs. And such managers, empirical studies suggest, are rare."

Do you agree with Professor Scherer?

A. I think that's right in my judgment.

Q. How does one go about determining whether a company is risk averse?

A. Well, I think first and foremost, it's actually

a fair presumption that companies tend to be risk averse in the sense of risk aversion being one way to explain, an economist's way to articulate, the sensitivity to risk that does underlie a great deal of corporate decision-making.

I should say in that context that risk aversion is a phrase that lots of economists like to use to describe this phenomenon, but it's by no means a universal phrase in the business community. I think if I asked a typical businessperson, are you risk averse, is your company risk averse, it's hard to know how they would respond to that, but if you look at corporate decision-making, it's commonplace to see that corporate decision-making does take risk into account in the very way that risk aversion would help to explain through the economic perspective.

Q. What about individual managers of companies, are they also risk averse?

A. Individual managers are quite likely to be risk averse in the sense that they are humans, and humans tend to be risk averse about their own personal finances, their own personal economy.

Within the corporate setting, individual managers will naturally, where they have discretion over decision-making, will be in some ways making

decisions that reflect their own judgment, their own taste, and their own personal risk aversion as well to the extent that the decisions they make wind up influencing their own personal prosperity.

That would be the case where they're compensated by the corporation in terms that reflect the outcomes of the decisions they make on their portion of the business, both in the short run and the long run. I'm thinking about your annual bonus if you're an executive, but perhaps even more importantly, the entire course of your career you might feel as a manager is affected by how people in your hierarchy judge what your results have been as a manager over the part of the business where you have managerial authority and discretion.

Q. Does economic theory tell us something about how risk is likely to affect a patent holder or a branded incumbent's negotiations in settling patent litigation?

A. Well, as we were discussing at the demonstrative, the first and foremost way that you can see that in the demonstrative is that the prevalence of risk aversion on the part of the incumbent patent holder tends to move the reservation date to the early side of the mean probable date of entry under

litigation. I think this is probably particularly salient for the incumbent, for the patent holder, in this setting, because it's understood in economics that the risk premium, the value of offloading risk, the pressure behind the risk and the need to try to mitigate it as best as possible, all of these are more powerful forces the larger is the amount of money or value that is at stake for the corporation.

And in the setting of the kinds of patent disputes that I'm analyzing here, it's the incumbent who has the greatest amount of profit or value at stake, because certainly under the Bresnahan assumption number one where there's a monopoly, there's monopoly profit at stake, whereas for the litigating entrant, what that firm has to gain or lose is not so-called assumed monopoly profit but instead the profit flow that would come from a number two or a number three competitor in the market, and that's necessarily and understood to be a smaller amount of money at stake than that which is at stake and therefore at risk on the part of the incumbent. So, more risk aversion because there's more money at stake.

Q. Okay, let's -- I want to turn to tab 5. This is the rebuttal expert report of Professor Timothy Bresnahan. We are going to be looking at page 1, and

the paragraph I want to look at is the last paragraph on the page, and the -- I'm going to start with the second sentence in that paragraph.

Have you found that, Professor Willig?

A. Yes, thank you.

Q. "A risk averse patent holder is willing to settle for an entry date that is earlier than the expected entry date under litigation in order to gain certainty. Risk aversion makes settlement more likely, but does not explain why the form of the settlement should involve a reverse payment. To develop a theory that justifies a reverse payment, Professor Willig must combine risk aversion with an explanation for why the entrant is unwilling to accept the earliest entry date that a risk averse patent holder would be willing to offer."

What I'd like you to do is -- let's -- what we're going to do is we're going to focus on the first few sentences there. So, let me just read those.

"A risk averse patent holder is willing to settle for an entry date that is earlier than the expected entry date under litigation in order to gain certainty. Risk aversion makes settlement more likely." Let's just stop there.

Now I want you to look at a second quote, and

then I am going to ask you questions about both of those. So, let's go to tab 4, this is SPX 2295, and we're looking now at the quote from Kenneth Arrow.

Who is Kenneth Arrow?

A. Kenneth Arrow is another truly great modern economist who, like Paul Samuelson, was one of the founders of modern economics, early Nobel Laureate. He's actually still an active researcher, lecturer, holds a professorship at Stanford right now.

Q. Let me read this quote.

"From the time of Bernoulli on, it has been common to argue that (a) individuals tend to display aversion to the taking of risks, and (b) that risk aversion in turn is an explanation for many observed phenomena in the economic world."

Now, Professor, I would like you to go back to your demonstrative that we have up there, this was at tab 17, and I'd like you to see if you can just explain to us, using the demonstrative, Professor Bresnahan's point where he says, "A risk averse patent holder is willing to settle for an entry date that is earlier than the expected entry date under litigation in order to gain certainty."

A. His point in that sentence is that the applicable arrow here is not the one that I scratched

out but instead the one that I had drawn originally, which moves to the left of the mean probable date of entry under litigation. In that sentence, Professor Bresnahan is saying that I had it right the first time instead of after I scratched it out, and the reason I scratched it out is not because Professor Bresnahan actually wrote that sentence but because the analysis that Professor Bresnahan utilizes to reach his conclusion that's important to this case, the so-called Bresnahan rule, that conclusion is based on an arrow that necessarily stops here, although in this picture and in that quotation by Professor Bresnahan, the arrow would move to the left of that mean probable date as originally pictured.

Q. Is Professor Bresnahan ignoring what he said in that sentence when he draws his -- when he comes to his reservation date?

A. Yes.

Q. Okay. How is -- how does the Arrow quote figure into this analysis?

A. The good Professor Arrow is saying that the arrow would generally be moving to the left of the mean probable date. It says risk aversion is a general phenomenon. As a result, when one draws a picture like this, the way accurately to draw it, it would be to

have the arrow extend to the left of the mean probable date of entry.

Moreover, Professor Arrow is saying that one can only understand a great deal of important economic phenomena through the lens of allowing there to be risk aversion. This is not just a theoretical nicety in the view of Professor Arrow; rather, an essential part of our ability to understand real behavior, business behavior, as well as policy under circumstances where risk is important.

Q. Now, if you would have your seat again for just a minute, I'd like to now go to the second part of that statement in tab 5 at page 1, which says, "To develop a theory that justifies a reverse payment, Professor Willig must combine risk aversion with an explanation for why the entrant is unwilling to accept the earliest entry date that a risk averse patent holder would be willing to offer."

Do you see that sentence?

A. I'm just getting to it now, actually. Yes.

Q. Okay. Are there reasons that an entrant would not accept the earliest date that a risk averse patent holder is willing to offer?

A. Yes, I think there are perhaps many and certainly several reasons why that might be the case.

Q. Okay. Can you give me -- can you give me an example of one?

A. One example would bring us to the title of this demonstrative, namely, the Cash-Strapped Generic.

Q. Okay. Professor, would you go back to our board again? I know I'm treating you like a yo-yo here.

A. I'm glad you said that, Counsel.

Q. Can you show us -- can you show us now -- we're talking about tab 17 again, which is the Cash-Strapped Generic, and that is SPX 2332. Can you show us your understanding of the impact of net consideration in Professor Bresnahan's model?

A. Yes. Suppose with Professor Bresnahan that we start with the concept that the incumbent will not accept any settlements that are to the left of the mean probable date, and that would flow from Professor Bresnahan's analysis as pictured here under the circumstances that the incumbent has no risk aversion, no other substantial litigation costs, and some of the other cases that I handle and will have the chance to I hope describe later on don't apply as well. So, for Professor Bresnahan, the starting place, the reservation date is always the main probable date of entry under litigation.

Then Professor Bresnahan goes on to say that if net consideration were paid out by the incumbent, then that payment must move the reservation date to the later side, that the fact, if there were to be a finding, the fact of that payment must be compensated for the incumbent by a movement of the reservation date out to the right.

And here's where Professor Bresnahan's logical conclusion, based on his narrow and I think unreliable foundations, this is where his conclusion follows, because as you can see from the picture, if you have to start at the mean probable date of entry as the location of the reservation date, and if net consideration is paid which must move the line, the reservation line, out to the right, then Professor Bresnahan notices that given those two ifs, the conclusion is that any settlement that the incumbent will accept must be to the right of the mean probable date of entry and therefore later than the date that signifies the break-even point for consumers relative to litigation. So, that's why Professor Bresnahan says if there is net consideration paid, then the result must be a bad thing for consumers.

Q. Okay, why don't we look at now the arrow that was originally drawn, "With risk aversion or other

litigation costs, the incumbent will accept these settlements."

What happens if you have net consideration under those circumstances?

A. So, if the reservation date for the incumbent is not the mean probable date, but rather, a date on the early side of the mean probable date, because of risk aversion, other litigation costs or other forces, then if net consideration were paid, that would, indeed, move the reservation date to the right, as Professor Bresnahan noted, but now the result of that movement to the right can still be on the earlier side of the mean probable date of entry, thereby leading to a settlement with an entry date that is positively favorable for consumers relative to the mean probable date of entry.

Q. Does that have to be the outcome?

A. It doesn't have to be the outcome, but the opportunity to use a side deal with net consideration under these circumstances opens up the opportunity for settlements that might otherwise be impossible that are favorable, positively favorable, for consumers.

Q. With net consideration in this model, you said it's not possible. Does that mean it is possible that with net consideration and risk aversion you could

still have an anti-competitive settlement?

A. Yes, it could.

Q. Why don't you take your seat again for a minute.

So, let's go back to tab 5 again at 1 where Professor Bresnahan says, "A risk averse patent holder is willing to settle for an entry date that is earlier than the expected entry date under litigation in order to gain certainty."

Given that quote, how can Professor Bresnahan possibly conclude that net consideration always takes you past a mean probable entry date?

A. He could only reach that conclusion by employing an analysis that absolutely neglects his own assertion here.

Q. Okay. So far we have considered Professor Bresnahan's comparison between entry date under settlement versus the entry date under litigation. Are there other possible comparisons an economist might want to make?

A. Yes, I think there might be.

Q. And what are those?

A. Well, we've been talking here about comparing the entry date under the patent settlement with the mean probable date under litigation, but it's at least

possible to think about comparing the date of entry under the settlement that is being analyzed with the entry date under some other settlement that might be conceived of as a real practical alternative.

Q. And how would an economist want to go about looking at that?

A. Well, an economist would perhaps worry that there might be such an alternative, and that would provide a standard of comparison that would suggest the actual entry date under the real settlement is later than it would otherwise necessarily have to be, but the way to go about that is through direct evidence.

If I were advising an administrative agency in this respect, I would certainly advise that this would be the kind of analysis that would require a direct inquiry, direct evidence of such an actual practical alternative other settlement that involved earlier entry and therefore were preferable for consumers.

Q. Okay, let's look at tab 16. This is another part of Professor Bresnahan's testimony, and here we're looking at line 13 at 1008, and I am going to go to line 3 of the next page, and let me read that for you.

"QUESTION: Now, I'm listening to your testimony, but I'm not sure I'm clear. You don't care for the June 17th, 1997 settlement agreement. You

believe it's anti-competitive, correct?

"ANSWER: That's correct.

"QUESTION: What is the scenario that you think should have occurred in this case?

"ANSWER: The -- either settlement with -- just for time or litigation. I don't have a view between those two, in particular because I don't know whether the -- whether the parties could have settled the lawsuit without a payment.

"QUESTION: As you're sitting here today, you don't know whether there was another settlement the parties could have agreed to. Isn't that correct?

"ANSWER: Right, that's correct."

So, if there's no evidence of -- no direct evidence of another settlement, are we back to the original comparison we were talking about, litigation outcomes versus settlement?

A. That's the only other possible comparison that I'm aware of and that I can imagine.

Q. Okay. So far, you've said that net consideration may not postpone entry compared to litigation. Are there circumstances where net consideration may be necessary for the parties to obtain any settlement at all?

A. Yes, I've analyzed a number of such situations.

Q. And is one of them the cash-strapped situation we've talked about here?

A. Yes, it is.

Q. Okay, why don't we go back up there, and since you've drawn on that one, maybe -- I think there's another board that we can put up.

Your Honor, with your indulgence, I'll go help the Professor put that board up.

JUDGE CHAPPELL: Yes, you may.

MR. SCHILDKRAUT: Thank you.

BY MR. SCHILDKRAUT:

Q. I think we have explained part of this demonstrative so far, and we are still at tab 17, SPX 2332. Can you explain the additional features of this demonstrative which are necessary to draw your conclusions?

A. Yes, well, note first we're back to the arrow for the incumbent that reflects risk aversion or other litigation costs. I also should mention that the reservation times for the incumbent and the generic are here, as they're pictured, linked to them having accurate assessments of the strength of the underlying patent litigation. They agree with each other, and they agree with the outside observer about those probabilities.

There's still risk. There's still a probability, but they agree on those probabilities. They are neither optimistic nor pessimistic. They're realistic about the underlying risk.

The added element is that the generic here is what I colorfully call cash-strapped, which is just meant to connote the idea that the generic has a need for cash on the earlier side, for whatever reason, but being cash-strapped would certainly seem to be one kind of rationale.

Of course, all economic actors, as economists see it, want more money and want more money earlier, earlier is better, but that's not the situation that this demonstrative pictures; rather pictures the case that the generic has a special need to have cash flow positive on the early side for its own reasons, either to undergird its ability to do business or because of its investors, for whatever reason, it just needs money, and it needs money earlier.

Under those conditions, the reservation time for the generic is necessarily way earlier than it would otherwise be if it weren't cash-strapped. If it weren't cash-strapped, it would be willing to wait until the mean probable date or as reflected by its risk aversion or other considerations, but here,

because of its need for early cash, it just can't or it's not willing to wait for some measure of positive cash flow.

The way I explain this to myself -- well, the mathematics explains it, but my underlying explanation to myself is that if the generic were to go to litigation, that would give the generic some chance of an early win with early entry which would provide it with a cash flow from its ability to be in the market on the early side if it were to win.

Of course, if it were to lose, it doesn't get that early cash flow, but then perhaps there's nothing much at stake for it anyway if it doesn't find an alternative source of cash so as to alleviate its need. That makes litigation relatively favorable for the generic, because it gives it a road to early cash, and therefore, the only kinds of settlements that it's willing to accept vis-a-vis the backdrop of that litigation is a settlement that will provide it with an equivalent or an amount of early cash flow that will solve its business problem.

Q. So, do we have a deal?

A. Well, we have a real problem here. There's a gap. There's no deal as pictured here, and the way to see it on the picture is literally the gap between the

ends of the arrows that picture the reservation times for the incumbent and the litigating generic entrant. When their arrows don't reach each other or overlap, then there's a gap that means they cannot come to terms on any date for entry, and so without something in addition, like net consideration, they can't possibly reach an agreement to their underlying patent dispute.

Q. Can they reach an agreement with net consideration?

A. What this picture shows is that if they are permitted by their own decision-making and by the legal environment to do a side deal that is linked to the original dispute and where that side deal does provide a flow of net consideration, net consideration provides the avenue for the conveyance of cash early to the generic, which permits the generic to accept the deal, and as shown on the picture, if you follow the orange bracket, which for my colorblind eyes looks a lot like the yellow I must say, those are the ranges of times for mutually agreeable settlements that are opened up by the opportunity to link net consideration to the settlement of the patent dispute.

My analysis shows there are those times for entry which will satisfy both the incumbent and the generic in the linked settlement and also be on the

early side of the mean probable date of entry so that those settlements with net consideration are favorable for consumers.

Q. And why are they favorable for consumers?

A. They're favorable for consumers because they entail entry that's earlier than the mean probable date of entry under litigation.

Q. Well, if settlements with net consideration were banned, how would that impact consumers in this particular demonstrative?

A. If the parties were not enabled, because of a ban, to use net consideration, there would be no deal. The result would necessarily in this analysis be litigation, and the impact of litigation on consumers is that it yields consumers only the mean probable date of entry under litigation, which is later than the entry date that would be enabled by some agreements which do entail net consideration.

Q. Are all possible settlements with net consideration beneficial to consumers or social welfare?

A. Absolutely not. The orange bracket shows the ones that are, but in fact, it's conceivable that there would be agreements with more net consideration that lie to the right of the mean probable date of entry and

that, therefore, would be adverse to consumers' interests.

Q. Can you determine that from the model, whether the outcome is going to be welfare-enhancing or not?

A. No, what the model shows is that without the right to use net consideration, it could be impossible to attain a socially favorable settlement. The model doesn't tell you whether a settlement in and of itself is a good one or a bad one for consumers.

Q. Why don't you take your seat again.

Well, why won't incumbents always give generics so much money in settlements that will push the date beyond the entry date under litigation?

A. A wise incumbent will understand that there's legal considerations and antitrust risk that should lead it to behave in a cautious manner towards these kinds of settlements.

Q. Is there any basis in economics for assuming that an anti-competitive incentive will always result in anti-competitive conduct?

A. We always think when we're doing antitrust economics that on the one hand there may be business or profit incentives to do things that may or may not be legally impermissible but that on the other side there is the awareness of the business decision-makers about

what are the lines that are drawn or the forces that bear on them from antitrust, and the whole purpose of doing antitrust analysis as an economist is to try to infuse antitrust policy with the message which when received by the business community will lead to good outcomes instead of bad outcomes.

Q. Let's go back to Professor Bresnahan's assumptions and try to compare them to yours.

What is the underlying assumption in the Bresnahan model relating to risk?

A. That there's absolutely no risk aversion that affects the willingness of the incumbent to settle.

Q. And does that mean that his assumption is risk neutrality?

A. Yes.

Q. Did you see any proof in Professor Bresnahan's testimony of the risk neutrality assumption?

A. No, as I recall his testimony on the subject, he said he saw no signs of risk aversion.

Q. Assuming there was no evidence as to whether firms were risk neutral or risk averse, would there be a reason to prefer the Bresnahan model to the Willig model?

A. Tricky wording, Counsel. I prefer the Willig approach to be sure, because I think that the correct

general presumption is that risk aversion is an important force among corporate decision-makers in the presence of risk.

Q. If we throw out the Bresnahan model because of the absence of -- because of the use of risk neutrality, what then can we say about whether net consideration establishes a payment to delay?

A. In an analytic framework that accepts the idea of risk aversion like mine and unlike the one actually employed by Professor Bresnahan, a finding of the conveyance of net consideration in and of itself cannot be the foundation for an inference of anti-competitive effect.

Q. All right, we're going to put up a new demonstrative. This is at tab 6. This is SPX 2331.

With Your Honor's indulgence, I would like Professor Willig to go back to the board.

JUDGE CHAPPELL: Yes, you may.

THE WITNESS: Thank you.

MR. SCHILDKRAUT: And if I may, I will help him put up the next demonstrative.

JUDGE CHAPPELL: Okay.

MR. SCHILDKRAUT: Thank you.

BY MR. SCHILDKRAUT:

Q. Can you identify SPX 2331 for us?

A. Is that this chart, Counsel?

Q. That chart, yes.

A. Okay, this is another demonstrative for my analysis.

Q. And can you explain what misplaced optimism is?

A. Yes. This chart is very much like the last one in terms of the various elements that it has. Once again, the reservation time for the incumbent is to the left of the mean probable date because of risk aversion or other litigation costs, but now what's different underlying this analysis is that the possible entering generic is optimistic about its chances of prevailing in the underlying patent dispute. This is drawn so that the incumbent is not pessimistic nor is it optimistic but instead has a realistic assessment of the chances of prevailing.

It's not zero one, it's still probabilistic, but the incumbent is realistic about that risk, but what's pictured here is where the generic is excessively optimistic relative to what we, the analyst, know to be the true odds, which this analysis assumes is information and knowledge shared by the incumbent. So, that's what's different.

That difference drives yet another reason on top of the reason that we were just talking about,

namely, the cash-strappedness of the generic entrant, but here, due to the optimism of the generic, it thinks it's got a better shot at winning the patent dispute than we, the analyst, know to be the case, and the result is that the optimistic generic is holding out for a very early entry date, because that's what it thinks is equivalent from its point of view to litigation, because it thinks it's got especially favorable odds of prevailing in that litigation.

So, the generic will not accept any entry date in a pure patent-splitting agreement that is anywhere later than the end of its arrow, but like in the cash-strapped case, we can see that there is a gap between the ends of the arrows, which means that if we just stick to a straight patent-splitting agreement, there's no deal. These two parties cannot come to an agreement. Even though the incumbent is risk averse and very anxious to offload the risk, which is why the arrow is to the left of the mean, still the over-optimism of the generic as pictured overcomes that degree of willingness to settle on the part of the incumbent, and a gap remains as a result of the excessive optimism.

Q. How can we get a deal in this situation?

A. In this situation, there's one way to get a

deal, and that is to permit net consideration to flow from the incumbent to the overly optimistic generic. That payment of net consideration can close the gap, and my analysis shows that in these kinds of situations there may very well be a range of settlement dates which can be supported by an agreement with a side deal, with net consideration, and that moreover, in these cases there exist side deals with net consideration that still leaves consumers positively better off than consumers would be under litigation.

Q. And what impact would there be on social welfare if net consideration was banned in this situation?

A. Well, in this situation, if net consideration were not permitted to flow or if it were suppressed or discouraged sufficiently by legal policy, mistaken policy in my view, then there could be no settlement, and consumers would wind up instead facing the outcome of litigation, which outcome has this mean probable date which is later than what the consumers might obtain from a settlement that were made possible by the flow of net consideration.

Q. You've already said that Professor Bresnahan assumed risk neutrality in his model. Did he assume that generics would not be over-optimistic?

A. In his analysis leading to the Bresnahan rule, he doesn't seem to take into account optimism or pessimism, and yet in his report, when he's introducing the entire framework, he does seem to take optimism very much into account, but he fails to put the optimism together with the rest of his analysis to uncover cases of this kind, and cases of this kind are totally the opposite, contradictory, to what he asserts is his policy conclusion.

Q. Why don't you take your seat again, and we are going to turn to tab 18. This is SPX 2991, demonstrative for identification, and we have two quotes from Richard Posner.

Who is Richard Posner?

A. Richard Posner is the chief judge of the Circuit Court in Chicago, Seventh Circuit, but more -- I shouldn't betray my prejudices, but even more important than that, he has had a great career as a scholar and is really very much the founder of the modern field of law and economics and I think a future Nobel Laureate for that purpose.

Q. Okay, let's -- let me read these two quotes. The first one:

"The three factors thus far identified as affecting the decision to settle rather than

litigate -- the relative costs of litigation and settlement, the parties' attitudes toward risk, and differences between the parties' judgment of the likely outcome if the case is litigated -- are interacting."

Now let me read the second quote.

"A settlement negotiation is an example of decision making under conditions of uncertainty. In such a context, successful completion of the negotiation is affected not only by the costs of negotiation relative to those of the alternative decision-making procedure (here litigation) but also by the parties' attitude toward risk and by any differences between the parties' judgments on the likely outcomes under the alternative procedure."

In terms of what Judge Posner is identifying here, are the conditions here similar or different than the conditions in your model?

A. No, this is a very apt description of some of the features of my analysis we've just been discussing. The parties' attitude toward risk, mentioned here specifically is about risk aversion, and differences between the parties' judgments on the likely outcomes under the alternative procedure, namely litigation, is the element that was just introduced in this demonstrative under the rubric of misplaced optimism.

Q. Professor Willig, did you arrive at your conclusions by just drawing things on a chart or did you do something else?

A. No, actually, I don't draw very well. This is a demonstrative that illustrates the results of an analysis that I undertook using the tools and the language of economic analysis, algebra and symbols and equations and the like.

Q. Okay, let's turn to tab 7, SPX 2321, and this has several pages in it. Can you identify this for us?

A. Yes, these are some pages from one of the appendices to my report in this case, and this is the part that begins to set up the analytic model. In particular, it's the part that begins to define the notation and is directed at uncovering the private incentives to settle, i.e., the analysis that undergirds the location of the boxes on the demonstratives that portray the incentives of the incumbent and the litigating entrant.

Q. Okay, let's turn to SPX 2326 at tab 19. Can you identify this for us?

A. Uh-huh, that's a diagram that illustrates in a more technical mode the analytics that appear in the exhibit that we were just talking about.

Q. And is this part of your report also?

A. Yes, this was part of my report.

Q. Let's turn to SPX 2322. This is tab 8. Can you tell us what this is?

A. This is also part of the -- one of the appendices to my report. It continues with the portrayal of the analytics, in this portion particularly focusing on the social evaluation of a settlement, i.e., how to understand from the analytics whether a particular settlement is one that consumers would find favorable to litigation or not.

Q. Okay, let's turn to SPX 2323, tab 9. Can you identify this for us?

A. This is also a part of one of the appendices to my report, and it continues on with the portrayal of the analytics that I was just describing, in this case going on to represent analytically in the model the impacts of risk aversion and also discounting for the time value of money.

Q. Let's turn to SPX 2327. This is at tab 20. Can you identify this for us?

A. Yes, this is another pictorial that helps the student of algebra and economic analysis better understand the impact of the analysis that first shows up in the section of the previous exhibit labeled Risk Aversion.

Q. Let's turn to SPX 2309 at tab 10. Can you identify this for us, please?

A. This is a demonstrative that was completed soon after the time of my report which gathers together the analytics to complete the analysis of the case represented on the picture; namely, settlements with misplaced optimism.

MR. SCHILDKRAUT: Your Honor, we offer into evidence SPX 2321, 2322, 2323, 2326, 2327 and 2309.

MR. GIDLEY: No objection, Your Honor.

JUDGE CHAPPELL: Any objection?

MS. CREIGHTON: Just one moment, Your Honor. No objection, Your Honor.

JUDGE CHAPPELL: SPX 2321, 2322, 2323, 2326, 2327 and 2309 are admitted.

(SPX Exhibit Numbers 2321, 2323, 2326, 2327, 2309 and 2322 were admitted into evidence.)

BY MR. SCHILDKRAUT:

Q. Professor Willig, I would like you, with Your Honor's indulgence, to go back to the board again. We are going to try another model. This is SPX 2334, tab 21.

With Your Honor's indulgence, I will go help.

JUDGE CHAPPELL: Sure, go ahead.

BY MR. SCHILDKRAUT:

Q. Okay, SPX 2334 is now up on your board, and it's Entry by a Third Party. Can you explain what "entry by a third party" means?

A. Yes, this is an illustration of my analysis of a situation which is somewhat different than the ones just covered in the following respect. This analysis assumes that there will be a third party entering this market sometime during the time span of the life of the patent, and this third-party entrant is not subject to the litigation.

This is not the same thing as the litigating entrant. This is another firm who is going to enter, and the possibility of that firm's entry is understood both by the incumbent and by the litigating entrant. So, this is what we say is common knowledge, the fact of or the possibility of the third-party entry is common knowledge to the other players in this circumstance.

Q. Does the common knowledge relate to certain entry?

A. Actually, the way the algebra is cast, there's a certainty to the entry, but I think this model is robust. It's just an added complication to the mathematics to put in some probabilities of entry at different possible times by this third-party entrant.

Q. Okay. How is third-party entry affecting our reservation dates here?

A. Well, it's interesting. Notice from the description of the incumbent in the box that in this model, I am assuming away risk aversion, and I am assuming away litigation costs. I don't assume them away because I think they're inapplicable. I continue to think that they are applicable, to be sure, but following common economic practice, when there's a new analysis done that's being driven by a different effect, it's really useful analytically to strip away as many of the other parts of the backdrop that are necessary to provide clarity, provided that that doesn't swing the conclusion in an important way. Swinging the conclusion by leaving something pertinent out is not a good analytic process.

But here, the differences between the other cases and third-party entry cases survive and are actually clarified by leaving out the added complications of risk aversion and litigation costs. So, here, interestingly, the incumbent who expects further entry will accept these settlements, and the reservation date of entry that the incumbent is willing to accept is systematically on the early side of the mean probable date of entry under litigation.

Let me define a little more clearly here what is that mean probable date. Here, this mean probable date does not include the entry of the third party. Rather, it has the same meaning that it's had on the previous demonstratives; namely, it's the mean probable date of entry by the litigating entrant, because that's the date that is the natural point of comparison with the date of entry by the litigating entrant as the date of settlement. So, this reflects the date of entry by the litigating entrant's entry, not the date of entry by the third party.

So, here the incumbent is willing to go to the early side of this mean probable date, and the reason basically is that the out-years, the portion of this time scale after the entry has occurred by the third party, is really of less importance to the incumbent because of the extent of competition that will be in the market at that time, so the profit opportunity is less, which makes that part of the time scale less important to the incumbent and therefore pushes the time at which the incumbent is willing to settle to the left of the mean probable date.

For the very same kind of reason, the generic, who also shares that same expectation of further entry, will also only accept these settlements, also moves

significantly to the early side of the mean probable date of entry. In this model, because the stakes in the entry by the third party are different as between the incumbent and the generic, their reservation dates don't necessarily move to the same extent to the early time, and as shown here, because of that difference in stake that they have, there is a gap between their reservation dates.

I think the most interesting part of the change in the scenario due to the analysis of third-party entry is what happens to the impact on consumer welfare. Here, as shown, it's quite possible that the break-even entry date from the consumer perspective is moved to the right of the mean probable date of entry under litigation. Here, consumers are willing to wait, if they have to -- they would rather not wait -- but if they had to wait, they would be willing to wait until after the mean probable date of entry for a reason that I think is easy to understand from the analysis.

The biggest benefit that consumers can get comes from the portion of the time line when the litigating entrant is in and also the third party entrant is in, as well as the incumbent being in, because in my analysis, I have assumed that when all three of those firms are there, the outcome is highly

competitive, very advantageous to consumers, and so consumers really relishing the opportunity to have a period of time when that occurs -- and it's bound to occur under a settlement and not bound to occur under litigation -- are willing to wait longer for entry under settlement if they have to. This comes out of the math as a real live possibility.

Q. What happens here if net consideration was banned?

A. There's a systematic gap in the analysis. It's not just an area in between, it's a systematic gap between the reservation dates of the generic and the incumbent in this model because of the entry by the third party. So, without net consideration, there is not going to be a settlement which entails just a patent split date, and as a result, consumers miss out, are forced to accept the results of litigation, which systematically is not going to give them the benefit of having all three parties in the market in the out portion of the time period with a high enough probability to make consumers fully happy.

But with net consideration, the gap can be closed, as the picture illustrates and the math makes clear. There's plenty of circumstances where the opportunity to use net consideration creates the

opportunity for a mutually advantageous settlement as between the incumbent and the generic, settlements which can be quite a bit preferable for consumers than simply waiting for the litigation to produce its mean probable entry date.

Q. Professor, if you would take your seat.

A. Thank you. Before I do that, if you don't mind?

Q. Okay, one more thing you need to say?

A. Yeah, well, I kept pointing to the mean probable date of entry, but the consumer arrow may very well go to the right of there, and so the welfare-enhancing settlements under net consideration start here, but they do go past the mean probable date of entry. I think I was slightly misleading in my terminology.

The range of those settlements made possible with net consideration, which are preferable to consumers, in this case do go to the later side of the mean probable date of entry. So, that is a conservative view of what keeps consumers whole vis-a-vis litigation.

I think the reason is that here there's a distinction between the mean probable date of entry from the consumer perspective, taking into account

consumer surplus, and that becomes different than the statistical mean date of entry under litigation, which doesn't fully reflect the consumer perspective. So, in my analysis, I've created an understanding of where the arrow goes to by looking directly at the impact on consumers, not just concerning myself with a statistical measure of the mean entry date.

Q. Thank you.

So, I'd like to ask you about some conclusions we can draw from this model. Is risk aversion necessary to achieve welfare-enhancing results in settlements in your models?

A. Well, no, in the previous examples, risk aversion was an intrinsic part of what led to that conclusion, but here, in the case of entry by a third party, there's no risk aversion in my simplified analysis, and nevertheless, there is the possible, vital role of net consideration in attaining settlements that will be favorable to consumers as well as more generally favorable as we discussed earlier today.

Q. Is over-optimism necessary to achieve welfare-enhancing results in settlements in your models?

A. Well, that was the driving force in the last

model that we illustrated, but there is no over-optimism here. In fact, I'm not sure I mentioned it, but let me explain that in the entry by a third party analysis, in the mathematics pictured in this demonstrative, the expectations statistically that the parties hold about the strength of the underlying patent litigation, the probabilities are assumed to be in common with each other and accurate from the point of view of the outside analyst; namely, me writing the algebra down.

Q. Okay. And is another thing we've learned here that settlements that postpone entry beyond the expected date of entry in litigation can be pro-competitive?

A. Yes, as I was just explaining here, the statistical measure of the mean probable date of entry actually is not an accurate reflection of the full consumer perspective. When the consumer perspective is built into the applicable mean, in fact, the reservation time for consumers moves to the later side of the merely statistical mean probable date of entry under litigation.

Q. I'd like you to turn, Professor, to tab 11. This is SPX 2311. Can you identify that for us?

A. Yes, this is another demonstrative which was

prepared soon after the time of my report which sets out the algebra underlying what the case is that has been illustrated by this demonstrative.

MR. SCHILDKRAUT: Your Honor, we offer SPX 2311 for identification into evidence.

MS. CREIGHTON: No objection, Your Honor.

MR. GIDLEY: No objection, Your Honor.

JUDGE CHAPPELL: SPX 2311 is admitted.

(SPX Exhibit Number 2311 was admitted into evidence.)

MR. SCHILDKRAUT: Your Honor, this would be a good time for a break. We are going to go into another long demonstrative.

JUDGE CHAPPELL: Well, let's talk about timing. Who's the next witness today?

MR. NIELDS: Professor Willig is the last witness for today.

JUDGE CHAPPELL: And then respondents will rest?

MR. NIELDS: We will call no further witnesses.

MR. CURRAN: That's right, Your Honor, there are still some document issues perhaps that need to be addressed.

JUDGE CHAPPELL: What about rebuttal?

MS. BOKAT: Pursuant to the Court's request, we

did some further juggling of witnesses and will be prepared to call our first rebuttal witness next Wednesday morning.

JUDGE CHAPPELL: Wednesday morning?

MS. BOKAT: Yes, Your Honor.

MR. CURRAN: Your Honor, on that subject, I indicated earlier that we would be filing a motion related to the proper scope of the rebuttal case. We have prepared a motion, and we expect to present it to Your Honor, courtesy copy, in Open Court right after the lunch break.

JUDGE CHAPPELL: Will complaint counsel be able to prepare an expedited response?

MS. BOKAT: We have not seen it yet.

MR. CURRAN: Right, let me clarify. It's being prepared. It will be done during the lunch break. We'll sign it, we'll serve it, we'll file it, and we'll present Your Honor with a courtesy copy after the lunch break.

JUDGE CHAPPELL: I would like to be able, if necessary, to hear argument on that perhaps Tuesday afternoon so that we can keep moving along, but I'll wait until you have a chance to look at the motion, Ms. Bokat.

MS. BOKAT: Thank you, Your Honor.

MR. CURRAN: Your Honor, if you're looking for ways to fill time, another possibility would be, you'll recall we filed a motion for a directed verdict.

JUDGE CHAPPELL: Right.

MR. CURRAN: And at the time we stated that we were going to be filing such a motion, there was some discussion of possible oral argument on that. We do request oral argument on that, and if Your Honor saw fit, early next week would be an appropriate time in our view.

JUDGE CHAPPELL: I'll consider that.

Why don't we go ahead and take our lunch break then if this is our last witness today, and we'll have a recess until 2:15. Thanks.

(Whereupon, at 1:15 p.m., a lunch recess was taken.)

AFTERNOON SESSION

(2:15 p.m.)

JUDGE CHAPPELL: Mr. Schildkraut, whenever you're ready.

MR. CURRAN: Your Honor, as promised, I do have a courtesy copy of our motion to limit rebuttal witnesses. May I present that to Your Honor?

JUDGE CHAPPELL: Yes.

MR. CURRAN: Moments ago, it was served upon complaint counsel and Schering.

JUDGE CHAPPELL: Thank you.

BY MR. SCHILDKRAUT:

Q. Professor Willig, I have put up another demonstrative. This is tab 22 of the book. It's SPX 2335 for identification, and it's entitled Signaling.

Can you telling us what signaling is?

A. Yes, signaling is the name given in economics these days for the phenomenon where there are at least two parties interacting with each other, and one party has superior information than the other party has about some feature of the environment that is of mutual concern. Not only does one party have better information, but the other party understands that the first party has superior information. Even though the party in that understanding doesn't know the

information, it knows the other party has better information.

Signaling refers to the use of some articulation, some offer, could be money, could be some object, could be some rights, could be some appearance by the party with the superior information who manages to convey the information that it knows better than the other party to the other party.

Q. Is this an accepted phenomena in economics?

A. This is a very exciting and important new area of economics, new since -- I should qualify the word "new" -- new since the time that I first went to school, which means it's getting quite old. In fact, this entire area of economic inquiry just was the subject of a triple award of the Nobel Prize a few months ago to Professors Akerloff and Spence and Stiglitz for their work on the subject of asymmetric information. One part of the word award went to Michael Spence on his seminal work some 20-25 years ago on the subject of signaling. The other third -- the first third of the prize went to George Akerloff for pointing out that under circumstances of asymmetric information of the kind that I just explained, there's a real problem in parties making mutually beneficial deals.

Q. What is the relationship between signaling and asymmetric information?

A. When two parties cannot come to a mutually beneficial arrangement because of asymmetric information, signaling is a device that the party with the better information can employ so as to convey the missing information and make the deal work.

Q. Can you give us an everyday example of this?

A. One example that I use with my students when they're thinking about how to comport themselves at job interviews is to suggest that they dress up very well and groom very well, and when they say why, just for representative of a potential employer, but they're coming here, and the rest of us look like slobs, so why shouldn't I continue with my normal everyday behavior?

And the economist's answer is, signal by dressing up very well and grooming very well to show your potential employer that you can do it and that you're willing to do that and that you're the kind of potential employee who understands the need to show respect. And although there's really nothing to being dressed up in the middle of an ordinary school day, the signal it conveys is viewed as very useful to the student's employment prospects.

Q. Let me give you another example, used cars.

Can you convey a signal in trying to buy used cars?

A. I'm not kidding, this is actually the setting of Professor Akerloff's Nobel Prize winning article, was used cars and what he called the lemons problem. In that setting, the problem is that if you're interested in buying a used car and you notice that I am stepping forward to sell you mine, you rationally take the implication that the used car that I'm offering you is actually a lemon.

Why do you take that implication? Because on average, if it were a good car, I'd be hanging onto it. I wouldn't be trying to sell it to you. And so the mere fact that I'm proffering it conveys information which is asymmetrically held between us. I know the car, I've been driving it, you haven't, so I know, but by offering it, I'm actually suggesting to you the adverse implication that this used car is a lemon. That stops you from buying the car, even though it might be a good car, and so we're not able to make a mutually advantageous deal because of adverse selection and asymmetric information, and this was first conveyed by the lemons model of Professor Akerloff.

The signaling that might help to close that gap occurs, for example, where the owner of the used car says to the buyer, I'm not selling this to you because

it's a lemon. I'm offering it because I've been called away to Europe for my job, and I can't put the car on the boat, so I have to sell the car. Therefore, you shouldn't take the implication from my offering it that it's actually a lemon. It's just a good used car that I've been holding onto, but now I can't use it anymore, so please, accept this as a good one. That would be a successful signal to break the logjam caused by the asymmetric information.

Q. And what is the application of signaling to a litigation dispute between a generic and a patent holder when they're litigating over patent rights?

A. Well, I think it's natural to understand that in those circumstances, the incumbent patent holder might very well have superior information as compared to the litigating entrant about the value of the rights that are at dispute in the patent litigation. For example, the patent holder may have better information concerning new technologies that it may itself have in development that may be valuable for the incumbent but which would at some time in the foreseeable future undermine the value of the rights to the product whose patent it is that's in dispute.

Or alternatively, the patent-holding incumbent may have superior information about the progress that

other possible generic entrants are making toward themselves entering the market in a way that would actually shorten the useful economic life of the patent from the point of view of the litigating entrant. In those circumstances, the incumbent, the patent holder, may very well actually have asymmetric information, and whether or not that firm actually has it, it's certainly natural to imagine that the litigating entrant supposes that the incumbent may very well have such superior information.

MR. SCHILDKRAUT: Your Honor, may Professor Willig approach the easel?

JUDGE CHAPPELL: Yes.

THE WITNESS: Thank you.

BY MR. SCHILDKRAUT:

Q. We are now looking at SPX 2335, which is at tab 22. Could you explain your model to us and how it works?

A. Yes, well, this is an analysis, a demonstrative that captures a simplified version of the effects that I was just trying to explain. Here, the incumbent is the one who knows whether the economic life of the patent that's under dispute is long or short. There are these two possibilities, and it is the incumbent who knows the truth about those two possibilities.

The litigating entrant understands that the incumbent knows the truth about that circumstance, but the litigating entrant doesn't itself know which of those two possibilities actually applies. So, that's the basic setup.

This -- the end of the yellow line here is the end of the economic life of the patent of the long kind, not the short kind, and the mean probable date of entry line that we're used to looking at here is drawn for the circumstance where the life is long, but, of course, the life might be short instead.

The arrow which pictures the reservation times for the incumbent is drawn on the basis of having a risk averse incumbent, and it's drawn for the situation where the incumbent happens to know that the economic life of the patent is of the long variety, and that's what makes the reservation time of the incumbent be where it is to the left of the mean probable date line under the circumstance where the life is long. Usually it's drawn to the left of that line because of risk aversion and other litigation costs.

If it is the case that the life is long, then consumers have a preference for settlement if that settlement occurs on the early side or up, to and including the mean probable date of entry. So, it's

the usual sort of consumer-oriented arrow that we have here.

The part that's really different has to do with the incentives of the generic. Here, remember, the generic is the one who doesn't know whether the life of the patent is truly long or short in economic terms, and, of course, the entrant is skeptical. The entrant is concerned that the true life of the patent may be short, not long. The entrant is rightfully concerned that it can't expect the incumbent to tell it the truth. After all, they're in negotiation, anything articulated is subject to interpretation by the generic, so the generic is skeptical, and as a result, the generic is holding out for a relatively soon entry time because of its justified fear that it may be the case that the economic life of the patent is short and that, in fact, the incumbent is well aware of that.

So, the result is the gap. Once again, there's an impasse gap. Just like the used car that could not be transacted, we have a gap between the willingness of the generic to accept a later entry time, which it would if it knew that the life of the patent was long, but it doesn't know that, and the earliest date at which the incumbent is willing to allow entry in the settlement, because it, in fact, knows that the life of

the patent in this circumstance is on the long side. So, there is a gap, and this gap is going to stop a worthwhile agreement from being accepted by both sides unless they are able to employ some device for signaling that will allow the information about the true life of the patent to be conveyed from the incumbent to the litigating entrant.

In this scenario, the offer of a settlement with sufficient net consideration takes on the role of the signal. The mathematics that I've worked through shows that there are welfare-enhancing settlements that are made possible by the conveyance of net consideration because the offer of the net consideration would not be worthwhile for the incumbent to make if the incumbent knew that the economic life of the patent were short. So, by making the offer of an entry date together with a measured amount of net consideration tells the skeptical litigating entrant that, in fact, ah, the incumbent must recognize that the life of the patent is long. Otherwise, that party wouldn't find it in its own interest to make this offer. The offer is being made, therefore I take the inference that the life of the patent is long, in which case the settlement date is not such a bad deal for me.

So, here, the orange bracket shows the dates of

settlement that in this example can be supported by that very kind of agreement that has conveyance of net consideration as a signal to break the logjam caused by the information asymmetry.

In this class of cases, the bracket shows not only the ability to make a settlement where otherwise there is only a gap, but it shows that this range of settlements that are made possible by the passage of net consideration are desirable for consumers to give consumers more competition, more consumer surplus than consumers would otherwise be getting on average if instead the parties were driven to litigation by the asymmetric information impasse.

Q. And what would happen if net consideration was prohibited in this example?

A. In this example, if net consideration were prohibited, then the gap would apply. There could be no settlement. There would be litigation. The risk-bearing costs that would follow from litigation would fall on the incumbent, and consumers would be held to the mean probable date of entry under litigation given that the life was long, which is on the later side of some of the deals that could be supported had net consideration been allowed.

Q. Now, you said the risk-bearing costs. Is that

because the incumbent is risk averse?

A. Yes, in this example, the incumbent is risk averse.

Q. Can you give me an example in real life of risk aversion?

A. Well, here, for example, this is an incumbent who would be quick to buy insurance to cover business risks outside of this context, because that's a sign of the kind of costs of bearing risk that can be avoided by the purchase of an insurance policy. You buy the insurance policy, you offload the risk to the insurance carrier, and you're willing to pay the insurance carrier to perform that service for you as a company.

Here, what's happening is that the incumbent is willing to move the date of settlement on the early side as its way of paying for the insurance to get out from under the endemic risk caused by being in the litigation posture.

Q. Take your seat.

I'm now going to tab 12, which is SPX 2324, and could you identify this for us?

A. Yes, this is a portion of one of the appendices to my report which goes through the analytics necessary to do the analysis which is portrayed on the demonstrative that we were just discussing.

Q. Okay. Could you now turn to tab 23, SPX 2329. Can you identify this for us?

A. Yes, this is a diagram from that same appendix to my report, and actually it's an exhibit to my report, which illustrates some of the math that is laid out in the demonstrative that we just discussed.

MR. SCHILDKRAUT: Your Honor, we offer SPX 2324 and 2329 into evidence.

MS. CREIGHTON: No objection, Your Honor.

MR. GIDLEY: No objection, Your Honor.

JUDGE CHAPPELL: SPX 2324 and 2329 are admitted.

(SPX Exhibit Numbers 2324 and 2329 were admitted into evidence.)

BY MR. SCHILDKRAUT:

Q. All right, now let's turn to tab 13.

If I may approach, Your Honor, I'd like to put up another board.

JUDGE CHAPPELL: Yes, you may.

BY MR. SCHILDKRAUT:

Q. I've put up an SPX 2333 on the screen and on the board, and it's entitled Varied Assessments of Success.

Can you tell us what that is?

A. Yes, the idea of varied assessments of success

is that where both the incumbent and the litigating entrant have their own ideas about the probabilities of the underlying patent litigation going their own way, and it's said to be varied here because this particular demonstrative shows one of the cases where neither of them actually have it right from the point of view of the outside observer, we who are defining these analytics, they each have their own ideas about those probabilities.

MR. SCHILDKRAUT: Your Honor, may Professor Willig approach the easel?

JUDGE CHAPPELL: Yes, he may.

BY MR. SCHILDKRAUT:

Q. Could you explain this to us using the demonstrative?

A. I'll certainly try, Counsel.

Here, the incumbent has a view of the chances of its success in the underlying patent litigation that are on the pessimistic side. Now, I want to emphasize the power of the social scientist here. We, the analysts, are standing outside this context, and we think we know the true odds. In fact, we've defined what those true odds really are. And the mean probable date of entry under litigation line, as usual, on the demonstrative reflects the outside analyst's view of

what are the true probabilities.

The incumbent it turns out -- we can tell, the outside analyst defining the scenario -- the incumbent is on the pessimistic side of what we know to be the truth. The incumbent actually at the end of the day believes, all things taken into account, that it's less likely to win the underlying patent case than we, the outside analysts, think we know, and that's why on this diagram the incumbent shows up with a reservation time that is to the early side of the mean probable date of entry given the true probabilities that the outside analyst assigns.

Notice here the incumbent is not assumed to be risk averse, again, not because risk aversion is not an endemic part of a context like this, but rather, because the impact of varied assessments of success makes its own point without needing to be intermixed with risk aversion and other costs of litigation.

Meanwhile, the generic, as per varied assessments of success the outside analyst can ascertain in setting up this context, the litigating entrant is on the optimistic side of what the analyst defines as the true odds. So, the generic thinks it's more likely to win than the analyst thinks is the case, and for that reason, the entrant is holding out for an

earlier entry time than the mean, and in fact, as drawn in this example, the optimism of the entrant is actually stronger than the pessimism of the incumbent.

So, on net, they're at loggerheads because of their varied assessments of success, and that leads to there being a gap between their reservation dates -- once again, as we've seen in the other cases -- but now for this different reason, they are not going to be able to find a mutually agreeable settlement, because there are no commonly acceptable dates for entry within the setting.

Consumers, as usual, would be happy with a settlement that leads to an entry date any time up to the mean probable date of entry, but there is no settlement possible here unless they use some other dimension to help themselves close the gap.

If they're permitted to use net consideration, then once again, as per the previous demonstratives, the yellow bracket -- the orange bracket, rather, shows the ranges of entry times that could be supported with settlements that are undergirded by the passage of net consideration from the incumbent to the entering generic. The net consideration closes the gap, and the orange bracket shows those times which they can agree upon with net consideration that are also preferable

for consumers, because those are times to the early side of the mean probable date of entry.

Q. Is there any assumption in this model that differs from the assumptions that Professor Bresnahan has made?

A. Well, yes and no. I mean, Professor Bresnahan did not undertake an analysis that leads to his conclusion about the so-called Bresnahan rule that takes these varied assessments of success into account.

On the other hand, in his report, in fact, Professor Bresnahan does discuss the possibilities of pessimism and optimism and the possibilities that if the total amount of optimism on net is sufficiently great, there could be no agreement whatsoever. He mentions that, yet he does not take that into his analysis that for him undergirds his conclusion of the appropriateness of the so-called Bresnahan rule.

Q. So, how, then, if he understands this does Professor Bresnahan not get results that show that a settlement with net consideration may result in entry sooner than the mean probable entry date under litigation?

A. He just didn't do this analysis.

Q. Why don't you take your seat.

Is a competitive outcome assured here? Are we

sure -- if we -- if we pay net consideration, are we sure we're going to get a competitive outcome?

A. Oh, no, not necessarily. One can't tell from this model whether the resulting settlement will be to the left-hand side of the mean probable date and therefore beneficial to consumers or whether it might instead be the right-hand side. Rather, the model shows that to get the preferable kinds of settlements might very well necessitate the use of net consideration.

Q. And how much net consideration would get you the pro-competitive result?

A. Just enough to close that gap. There's a lot of mathematics in the demonstrative to show what range is consistent with a settlement entry date to the left of the mean probable date.

Q. Okay, let's turn to tab 14, SPX 2312. Can you identify this for us?

A. I'm sorry, what tab was that?

Q. Tab 14.

A. Yes, that's another demonstrative that I created soon after the time of my report which organizes the analytics specific to the case of settlements to patent litigation with varied assessments of success.

Q. And what does it show?

A. It shows the analytics that undergird this demonstrative. It shows that there are circumstances without risk aversion but with the disparate views of the likelihoods of success in the underlying patent litigation that I've just been explaining, that under such circumstances it may very well be necessary for the attainment of a pro-competitive settlement to utilize net consideration.

MR. SCHILDKRAUT: Your Honor, we offer SPX 2312 into evidence.

MS. CREIGHTON: Your Honor, the version of SPX 2312 that we have is incomplete. There's a figure that's attached to the original. I don't know if that's -- if they're offering the whole thing or just the incomplete version that's in the binder.

MR. SCHILDKRAUT: Well, since I forgot the figure, I can't offer the complete version.

Does that make any difference to your analysis, whether you have that figure or not?

THE WITNESS: If it helps the reader to understand the analytics better, then it's a good thing and I'm all for it.

MS. CREIGHTON: Then, Your Honor, if counsel proposes to substitute the complete version of SPX

2312, then we have no objection to that going into the record.

JUDGE CHAPPELL: Why don't you just pull that offer down until you have the proper version, okay? Thank you.

BY MR. SCHILDKRAUT:

Q. So, Professor Willig, what did we learn by applying your models?

A. Well, I think for me the main lesson is that the so-called Bresnahan rule is really a dangerous rule for the policy community or the legal community to adopt. The work in its totality shows that there are ample circumstances where net consideration is a very useful tool to attain socially beneficial settlements of patent disputes.

Q. Is this the -- the ones we have talked about here today, is this a complete list of circumstances where net consideration may be necessary to settle patent disputes and still have an entry date which is forward of the mean probable entry date under litigation?

A. No, absolutely not. This is really an occasion for a great amount of humility, because this is a very fresh topic for economics. Economists to my knowledge have been looking at this kind of issue only for a year

or two, which is a very short time in the passage of a topic through the mill of academic economics. This is a novel subject, and all we have here in the materials that we've been discussing today and the materials in my report for me are really just the beginning, and I've in no way been able to, and nor have my colleagues, undertake a search aimed at finding all of the underlying features of reality that might be important in these kinds of contexts that would lead net consideration to be a valuable tool for obtaining socially beneficial settlements of patent disputes.

This is just the -- a list of cases that I have come to that fall into that category, but I have no reason to believe that the list of features of reality that lead to the importance of net consideration is in any way limited to the list that I've been able to testify about today.

Q. What have you learned about whether a postponement of entry until after the mean probable date of litigation is always anti-competitive?

A. I've learned from the model, the analysis that includes the entry of a third party who was not a patent litigant but rather just an entrant sometime during the life of the patent, that that feature of the context alone can lead to the possibility that

consumers can find settlements with entry dates to the later side of the mean probable date of entry under litigation to be beneficial for consumers.

Q. What have you learned about using net consideration as evidence of an agreement to delay?

A. That would be an absolutely incorrect inference from the point of view of even a slightly expanded set of analyses over and above what Professor Bresnahan has considered.

Q. But you're not saying that net consideration is always pro-competitive, are you?

A. No, net consideration can undergird agreements that would be quite adverse to consumers and might be treated as such by the legal system.

Q. So, is this something that an economist would think one would want to still look at?

A. Absolutely. There is every reason to at least consider scrutinizing agreements which contain net consideration as part and parcel of them.

Q. So, how should from your perspective one go about determining the welfare effects of settlements with net consideration?

A. The main point is that there's no shortcuts to this analysis. Just using the shortcut of a finding of net consideration that's positive does not lead in any

reliable way to a conclusion that the agreement containing such positive net consideration is anti-competitive. This would be a dangerous approach from the point of view of my work.

Instead, since there are no shortcuts, the way to proceed is a direct analysis of whether or not there is harm to consumers from the agreement as it actually stands in its context. All relevant forms of evidence should be ready to be considered in my view by an appropriate fact finding process, and in particular, the underlying strength of the litigation, the patent litigation, is apt to be an important part of the range of relevant evidence to consider in reaching that determination.

Q. Well, suppose you cannot determine the fair date of entry under the litigation that didn't happen, can you then turn around and use the Bresnahan rule instead to determine anti-competitive effects?

A. Absolutely not. It's like saying I can't do the right analysis, so I'll embrace a wrong and dangerous analysis. That would be absolutely not the right way to go for policy.

Q. Well, from the point of view of economists, what's wrong with having a rule prohibiting patent holders from offering net consideration?

A. From the point of economics, there's nothing wrong with being permissive as a policy and as a legal stance toward those parties, incumbents, patent holders, to offering agreements that would contain positive net consideration.

Q. And --

A. Those kinds of agreements may be essential to break the logjam and to reach a socially beneficial agreement that would settle an underlying patent dispute.

Q. And if those were barred across the board, what impact would it have on consumers?

A. If those were barred across the board, the impact on consumers would often be negative, because settlement agreements that were beneficial to consumers would be cut off by such a bar.

Q. And what impact would that have on businessmen if that was just flat barred?

A. A flat bar, because it would undermine the ability of the parties to reach agreements that would settle their patent litigation, would leave businesses bearing undue risk and the costs of those risks that could otherwise be avoided by finding an appropriate pro-consumer settlement to their underlying patent dispute.

Q. Are you familiar with the term "facially anti-competitive"?

A. It sounds like a legal term.

Q. Well, let me give you a -- let me give you my definition anyway. Something facially anti-competitive is conduct that's difficult to comprehend as being motivated by anything other than anti-competitive -- an anti-competitive objective and is difficult to comprehend as having anything other than an anti-competitive effect, okay?

A. Okay.

Q. Okay. Is net consideration in a patent-splitting agreement under that definition facially anti-competitive?

A. No.

Q. From an economist's point of view, would there be harm in presuming that net consideration was anti-competitive?

A. Yes, for all the reasons that we've been discussing here.

MR. SCHILDKRAUT: No further questions, Your Honor.

MR. GIDLEY: No questions, Your Honor.

JUDGE CHAPPELL: Cross?

MS. CREIGHTON: Yes, Your Honor.

Your Honor, at some points I was hoping to be able to use the nice charts that Schering has provided, and I don't know what would be the best logistics so that I'm not forcing Dr. Willig to have to turn around all the time. Would it be better for me to place the charts here or over there? I don't know if Dr. Willig would be able to see them or you.

JUDGE CHAPPELL: The right side is probably better, my right.

MS. CREIGHTON: Your Honor can see if it's here?

JUDGE CHAPPELL: Yes. You don't need an easel. You can move the entire apparatus there. Just watch for all the cords on the floor.

MR. NIELDS: Is that visible or should we move it this way?

JUDGE CHAPPELL: A little more. That's good.

MR. NIELDS: Still further?

JUDGE CHAPPELL: That's perfect for me.

MR. CURRAN: We'll be back here, Judge Chappell.

JUDGE CHAPPELL: I see you back there, Mr. Curran.

MS. CREIGHTON: Dr. Willig, will you be able to read from there or not really?

JUDGE CHAPPELL: I can see under the exhibit.

THE WITNESS: If you make big gestures, then I will probably be able to see what you're aiming at.

MS. CREIGHTON: What I was hoping to be able to do is actually point out things on the chart to you since it's hard to know sometimes where the arrows begin and end. Would you be able to see if I'm standing here --

THE WITNESS: I can see your hand.

MS. CREIGHTON: But you can't see the chart?

THE WITNESS: I can see the outlines of the chart. It's not in sharp focus. We'll try.

MS. CREIGHTON: We can start and you can let me know --

THE WITNESS: Absolutely, and if you'll permit me to rise and get closer if I need to.

MS. CREIGHTON: Certainly, if the Court doesn't mind.

CROSS EXAMINATION

BY MS. CREIGHTON:

Q. Good afternoon, Dr. Willig.

A. Good afternoon.

Q. Sir, you're not a lawyer, are you?

A. I'm not a lawyer.

Q. So, you've never tried a patent case, correct?

A. That is correct.
Q. And you've never been a judge, have you, sir?
A. No.
Q. You have never been a professional negotiator, correct?
A. No, I haven't.
Q. Or a mediator?
A. Not outside the family.
Q. Have you ever published anything in the Journal of Behavioral Decision Making?
A. No.
Q. Have you ever published anything in the American Behavioral Scientist?
A. No, I haven't.
Q. Have you ever published anything in Negotiation Journal?
A. No.
Q. Have you ever published anything in Organizational Behavior in Human Decision Processes?
A. No.
Q. You were retained by Schering-Plough in this case, correct?
A. Yes.
Q. And Schering did not ask you to express an opinion on market power in this case, correct?

A. That is correct.

Q. Schering also didn't ask you to express an opinion on market definition in the case?

A. Correct.

Q. Sir, you have not formed an opinion as to whether the Schering-Upsher agreement is pro-competitive or anti-competitive, correct?

A. Not based on the facts, but I have formed an opinion, as I've been expressing all day, about the methodology that Professor Bresnahan seems to utilize to reach his opinions about those questions.

Q. But you haven't -- I'm sorry. But you haven't looked at the facts in an attempt to reach a conclusion about whether these agreements, in fact, are anti-competitive or pro-competitive. Is that right?

A. That's correct.

Q. Similarly, with respect to the Schering-ESI settlement, you haven't looked at the facts to reach a conclusion with respect to whether that agreement is pro-competitive or anti-competitive?

A. In the same sense of my last answer, yes.

Q. Okay. Schering also didn't ask you to express an opinion as to whether early entry by a generic competitor is good for consumers, correct? You've assumed that for purposes of your analysis.

A. Yes, I think that's fair to say. I mean, my models do assume it or they derive it from the analytics that undergird these analyses. There are other possible ways to understand the impact of generic entry which might lead to a possibly different answer. Those features are not in these models, and I have assumed that these models are applicable in that regard.

Q. Just for clarification, Dr. Willig, I'm showing you what previously has been marked as Exhibit SPX 2065 and was a demonstrative in Dr. Addanki's testimony. Can you read that if it's up on the computer, at least? It's not so good on the far screen.

A. I'm beginning to wonder about my prescription. I'm fuzzy at every distance. I can make it out.

Q. Okay. So, with respect to the first diamond, you weren't asked to express an opinion, correct, monopoly power?

A. I was not asked to investigate myself the issue of monopoly power here, but rather, to assume it for the sake of my analysis.

Q. And you were asked -- you were asked to express an opinion about the methodology with respect to whether -- what to do about delayed entry but not the actual determination of whether the agreements are

early or late, correct?

A. I was certainly not asked to express an opinion about the facts, about the timing of entry, but I think, as you asked, about the methodology of how one would make a determination of whether entry were delayed or not relative to some potential benchmark.

Q. Okay. And then finally, you weren't asked to express an opinion as to whether if there were delayed entry whether consumers would be harmed, correct?

A. That's correct.

Q. Okay. Now, sir, you would not endorse a test that required the fact finder to conclude that the entrant would have to have won the patent case as a condition for finding the settlement anti-competitive, correct?

A. I'm having trouble sorting out the terminology of your question.

Q. Okay. Suppose someone said the fact finder has to conclude that the entrant would, in fact, have won the patent case in order to make a showing that a settlement agreement was anti-competitive, would you agree with or disagree with such a test?

A. I think I would disagree with it if by that you mean 100 percent chance that the entrant would win the underlying patent litigation, and but for that, there

could be no anti-competitive element to the arrangement?

Q. That's correct.

A. That would not be my view.

Q. And in fact, you would agree, wouldn't you, that even if there were a 50/50 chance that the entrant might have lost the case, it's still possible that there could be an agreement that was anti-competitive under those circumstances, correct?

A. Yes.

Q. And you would agree that a settlement agreement can be anti-competitive even if it results in entry before the end of a patent's nominal or legal life, correct?

A. Yes.

Q. Okay. Now, I've just picked one of your charts at random, so if there's another chart here that would be better for laying some basic understanding I think of features that are common to all of your charts here, but if you can't read it, let me know and we can pick another.

A. Thank you.

Q. We are currently looking at your chart labeled Varied Assessments of Success, and at the -- there's a box that says, "End of Patent Life," and by that,

you're not referring to the legal life of a patent, correct, you're referring to the economic life of a patent?

A. Actually, in this scenario, the end of the patent life is the legal end of the applicability of the patent, because here there's no other entry in this scenario other than the possible entry of the litigating entrant.

Q. In some of your models, are you assuming that it's the economic life of the model rather than the legal life of the model?

A. No, actually, I think in all of the demonstratives that we looked at today, the end of the patent life was intended to be the end of the legal patent life. In the one case where there was a third-party entrant arriving before the legal end of the patent life, in that case the benefits to the consumers and the impact on the incumbent and the impact on the entrant past the time of the third-party entry were all different. They were all affected by the fact of the third-party entry, but nevertheless, in that analysis, past the time of the third-party entry, there still was an economic value, an economic impact of the fact that the patent life remained. So, in all of the analyses that I've spoken to today, the end of

the patent life is just that.

Q. Okay. More broadly, in the algebra that you used in the models underlying these demonstratives, you defined theta as the economic life of the patent, not the legal life of the patent, correct?

A. I think that's probably right in terms of the way I cast the algebra, yes.

Q. So, even if the specific examples you've given here today on the demonstratives are the legal life of the patent, in order to reach the general conclusions you have in your algebra, you've been defining it by the economic life of the patent, correct?

A. Uh-huh, and in the algebra and the description of the algebra in the demonstratives, when I say the end of the economic life of the patent, what I mean is that events analyzed by the analytics have no consequence past the time of theta, that they're -- because the patent life has reached its economic end, whether it were to be affirmed or not or whether the infringement issue went this way or that way has no consequence on anybody's returns from this marketplace. So, it's like the patent doesn't matter anymore after that date.

Q. Let me show you page 6 of your report. It's Exhibit CX 1717.

A. I'm sorry, do I get a real copy?
Q. Yes, oh.
May I approach, Your Honor?
JUDGE CHAPPELL: Yes.
THE WITNESS: Page 6?
BY MS. CREIGHTON:
Q. Yes, the second paragraph.
A. (Document review.)
Q. And here in your report you're setting up your general analytics, and you state that you're defining the patent's economic life, in the last sentence as, "The patent's economic life will end when its legal life expires, when a superior product comes to market, or when (and if) demand for the product disappears for some other reason."
Is that correct?
A. Right, all of which adds up to the patent no longer matters after such a time.
Q. And so to determine the point at which that end point is reached, you have to know three things that you just identified in your report, correct? You have to know the patent's legal life, whether and when a superior product may come into the market, and when and if demand for the product might otherwise disappear, correct?

A. I think that's fair, if it's clear that those other provisos are understood to be ones which would make the patent irrelevant. It's got to be that strong.

MS. CREIGHTON: Your Honor, may I approach the chart?

JUDGE CHAPPELL: Yes, you may.

BY MS. CREIGHTON:

Q. Because, in fact, if the patent's economic life is not here, if this is the legal life but the economic life is here, that actually could change where the mean probable date of entry under litigation is. Isn't that right?

A. Well, actually, the entire diagram would move to the left, as it were.

Q. That's right.

A. Yeah.

Q. But that could also affect whether these settlements are aligned to the left or the right of that line, correct?

A. Well, I think the -- you might want to move the mean probable date of entry under litigation to the left. Also, this would be a matter of one's analytic inclination. You'd just move the whole diagram to the left and understand that all of those indications are

defined relative to the time when the patent becomes irrelevant, or not. I'm just keeping track of the different phases of the analysis.

Q. But certainly to know where that line was, the mean probable date of entry under litigation, you would need to know the three facts that we just discussed about where the patent's economic life ends, correct?

A. Well, if we move the entire diagram to the left, if that's the way the analyst wishes to continue, then the mean probable date of entry under litigation should take into account -- if there were any shortening of the economic life of the patent, that would become the end of the applicable yellow stretch of time, and the new mean probable date of entry would be moved over correspondingly.

If, on the other hand, the analysis took that period of time when the patent became irrelevant into account but chose not to move the entire diagram to the left, then we'd just adjust for it in some other pertinent way.

Q. Well, all those adjustments wouldn't necessarily be proportionate, would they?

A. If the entire diagram were moved to the left? I think -- well, perhaps not, but I -- they might. I don't see any reason why it wouldn't, frankly, as I sit

here, but I'm not staring at the algebra.

Q. Okay. Now, when you refer in your chart to net consideration, that could come about through a side agreement in which the parties don't make an even exchange of fair market value as well as through a settlement that transfers cash, correct?

A. Again, I'm not sure of the phraseology of your question. Net consideration could be just, as far as my model is concerned, a payment of cash with nothing else going on on the side, or more realistically and obviously with more complexity, it could be the payment of cash or other value above the value that's received in turn in the side deal.

Q. So, for purposes of determining the competitive consequences of the settlement, it's not important in your view for the -- whether the net consideration is in the form of cash or in the form of value that exceeds the value of what was returned, the way you've just defined it, correct?

A. Well, obviously it matters in reality in terms of what's in contention in a case like this. I understand there's quite a bit of contention about whether or not there is net consideration involved in one of these agreements, and so it matters in that respect, but in terms of my analytics, I'm just talking

about the size of the net consideration irrespective of what form it takes.

Q. Now, in determining the mean date of entry under litigation, you think that that should be determined objectively rather than using the subjective views of the parties, correct?

A. Well, my analysis takes the perspective of the outside observer, the social scientist as it were, asking the analytic question about whether or not the so-called Bresnahan rule is a good methodology, and in teeing up that question and in arriving at analytic answers to it, the outside analyst has to have a view of what the underlying truth is, and that's what the bubble on the chart represents. It's the analyst's benchmark for understanding what kinds of settlements will be preferable for consumers to litigation and which ones would not be.

Q. Well, isn't it true, sir, that you stated in your report that the only reliable way to determine whether a particular settlement is harmful to consumers is to examine the specific features of that settlement and, in particular, to determine if the date of competitive entry called for by the settlement comes before or after the mean date of entry under litigation?

A. Yes, absolutely, from the consumer's perspective.

Q. Okay. And so to do that, you need to know where that mean probable date of entry under litigation lies, correct?

A. In reality, going through a fact-finding process, I think in particular it is important for the fact finder to come to as good an understanding as possible of the underlying strength of the patent litigation.

Q. And to do that, it's your view that the fact finder should use some objective odds that the fact finder finds as opposed to some other method, correct?

A. Well, I think the appropriate way to proceed, if I could just cast it broadly, is to make an assessment based on expertise applied today but applied to the information that would have been or was reasonably available to the parties at the time that they were undergoing the negotiations.

MS. CREIGHTON: Your Honor, may I approach and provide the witness a copy of his deposition?

JUDGE CHAPPELL: Yes.

THE WITNESS: Thank you. What page?

BY MS. CREIGHTON:

Q. Page 74.

A. Seven?

Q. Seventy-four, lines 8 to 12:

"QUESTION: But you would use an objective assessment of the odds based on facts that the parties knew at the time of settlement, correct?

"ANSWER: For the purpose of assessing the mean litigation entry date, yes."

A. Yes.

Q. Did you give that answer and did I ask that question?

A. Yes, and I think I just gave it to you now.

Q. Now, one of the reasons --

If I can approach the chart, Your Honor?

JUDGE CHAPPELL: Yes, you may.

BY MS. CREIGHTON:

Q. One of the reasons you'd want to know the mean date of entry under litigation is that when you were talking about the payment of net consideration opening up the possibilities for settlement, the possibilities for settlement don't end at this line, do they?

A. They do not generally end at that line.

Q. In fact, in this chart, the payment of net consideration would open up the possibility of settlements ranging all the way from here to here, correct?

A. That's quite possibly right.

Q. And as you testified I believe in direct, settlements in this region would be good for consumers, and settlements in this region would be bad for consumers, correct?

A. Yes.

Q. And so in order to determine whether or not a particular settlement was good or bad for consumers, it's your testimony, isn't it, that it would be important to know where this line was?

A. It might very well be the most pertinent of evidence, yes.

Q. Just for purposes of terminology, generally, can we refer to the region that you've marked in orange maybe just as region A and then the region here from the mean date of entry under litigation to the end of the patent life as B, just to shorten things sometimes?

A. Well, you can use that, and I'll see if I remember.

Q. All right. Let me show you page 10 of your report, sir.

MR. NIELDS: Your Honor, I hate to interrupt, but I think the transcript is silent on the question of what sections of this line Ms. Creighton was pointing to when she said A and B, and I think if she identifies

it in words, I think we'll all have a better chance of knowing what's meant when she uses it.

JUDGE CHAPPELL: I was leaving it up to her to make her record, Counselor.

MR. NIELDS: Maybe I should have done the same, Your Honor.

BY MS. CREIGHTON:

Q. Dr. Willig, did you understand me when I was talking about region A to be referring to the orange region that's marked on your chart "Viable Welfare-Enhancing Settlements With Net Consideration"?

A. I think I did understand that.

Q. And I was referring to region B as meaning the region to the right of mean probable date of entry under litigation but to the left of the end of patent life. Did you understand that?

A. I think I did. Whether I can reliably remember that or not is something else.

Q. Okay. Directing your attention to the second paragraph of page 10 of your report, the -- in the middle of the paragraph, you state, "The only reliable way to determine if a particular settlement is harmful to consumers is to examine the specific features of that settlement, and, in particular to determine if the date of competitive entry called for by the settlement

comes before or after the mean date of entry under litigation."

Now, in order to perform that analysis, one of the facts I think you would agree that you need to determine under your test is an objective assessment of the litigation odds, correct?

A. Let me just point out that I'm really not advocating a particular test here. I never took this to be my role in this case. It wasn't part of my assignment. What's most important for me here is to really stop the adoption of the Bresnahan rule, which I regard as dangerous and unreliable for the reasons that I explained in my report, in my deposition and in my direct testimony.

I think in contrast to the Bresnahan rule, there is only one reliable way that we know, and that's to go right for an analysis of the settlement and to ask the question about whether we can ascertain whether or not there is consumer harm from the totality of the settlement, and it is true that in particular, one particularly relevant part of that assessment no doubt comes down to attempting to assess the strength of the underlying litigation, and as summarized in the way we're speaking about it now, by the comparison between the entry date under the settlement and the mean

probable date of entry under litigation from the consumers' perspective, but I'm here to present a rule, a test.

Q. So, you're not propounding that comparing the mean date of entry under litigation with the settlement date is necessarily a workable rule that a fact finder could use. Is that correct?

A. Well, it might be a workable rule. It certainly points to I think the need, once one understands that the Bresnahan rule is too unreliable to use, that one has to go directly to the facts about whether or not the settlement actually is viewed as harming consumers, rather than through an inappropriate shortcut, and inevitably going to the truth about comparing a settlement to litigation entails having a sense of the underlying strength of that litigation, which is what I'm expressing here and I've expressed before, but that's not to say that I am turning to the fact finder and saying, I have a Willig rule to replace the Bresnahan rule. That's just not the case.

Q. Okay. Well, I'm trying to understand what it is that you think, taking the long cut as opposed to the shortcut which you think shouldn't be followed, what are the factors or facts that a fact finder would have to look at in order to determine whether a

settlement is pro-competitive or anti-competitive.

A. Yes.

Q. All right. And we've agreed that one of the things that in your view you would look at is an objective assessment of the litigation odds, correct?

A. Yes, remembering that it's an objective assessment based on the information that would have reasonably been available to the parties at the time that they were undergoing their negotiations.

Q. And you would also need to know whether or not there was going to be entry by a superior product prior to the end of the patent's legal life, correct?

A. Well, as we've discussed, the patent life reaches its economic end when the patent is irrelevant to the marketplace, and that might happen short of the end of the legal life of the patent should a sufficiently superior product come along, but there's no more demand for the products that we would otherwise be talking about.

Q. And so you'd have to know whether or not there might be some other factor that would intervene and cut off demand for the product covered by that patent, correct?

A. If it were to be the case that the fact finder understood that in the back years of the legal life of

the patent, the patent would become irrelevant, then I would think the fact finder should take that into account.

Q. Okay. The fact finder would also want to take into consideration in your view the time value of money, correct?

A. Well, in my analysis, in my report, I show that the time value of money can come into play as it's experienced by the incumbent, the litigating entrant and also consumers. I also point out that if it's symmetric in the sense that all the parties have the same time value of money, then, in fact, the analytics essentially make the calculation of the time value of money drop out of the central role of the analytic comparisons.

However, if the time value of money is very different, for example, as between the litigating entrant and the incumbent as per the so-called cash-strapped scenario, then that differential in the time value of money actually plays a very important role in understanding what might have been the rationale for the side deal in its totality.

Q. And from the perspective of consumers, the value in the early years might be quite different from the value of the later years, correct?

A. Sure.

Q. You would also take into account the size of the market over time, correct?

A. Yes, the larger is the market during various phases, in particular with respect to the interaction between the incumbent and the litigating entrant, then that puts differential weights on those stretches of time from the point of view of the impact of entry dates on the impact on consumers.

Q. And in order to make a determination, you'd also want to know when and whether the generic was going to enter relative to the litigation that was pending, correct?

A. I don't know what you mean.

Q. Well, for example, whether the generic could enter during the pendency of the litigation.

A. The same generic who's litigating?

Q. Correct.

A. That might matter.

Q. It also might matter whether or not the generic was able to enter even once the litigation was over, for example, because of manufacturing or FDA approval concerns?

A. Yes, absolutely, because that certainly might affect, if it's important, what is the actual arrival

of meaningful entry from the consumer perspective under the settlement as compared to the eventualities that might occur under litigation.

Q. Now, if I understood you correctly, your criticism of Professor Bresnahan's test is that you think it could prevent settlements that would be beneficial to consumers, correct?

A. I would go more broadly that Professor Bresnahan's test poses the danger of stifling the ability of the parties to reach settlements of underlying patent disputes, and lots of different categories of social harm I think follow from that, as I discussed this morning. Yes, cutting off settlements that might be favorable for consumers, but also, I think it's a valid economic concern to understand that the same misapplication of a bad rule would be chilling the good effect of settlements on the parties, the litigating parties, and also on the general judicial system of our country, where it's important that settlements that are appropriate be fostered, not stifled.

Q. And if we could call up Exhibit SPX 2334. Maybe I could just use the chart.

This is the demonstrative Entry by a Third Party that you prepared, correct, Dr. Willig?

A. Yes.

Q. Now, you haven't done any empirical research regarding how many settlements in the real world fall within this model, correct?

A. You mean within the ambit of the settlements involved in this case?

Q. Well, are you -- have you done any research as to whether any cases in the real world actually fall within all of the conditions that you've identified within that model?

A. My understanding is that the specific portion of this model that gives it its name, Entry by a Third Party, that that's a factor of the marketplace that is realistic frequently and certainly within the cases that are at issue here.

Q. Okay, that wasn't quite my question, Dr. Willig. It was whether -- my question is, have you done any empirical research with respect to the number of settlements that would satisfy all of the conditions that are required to set up the conditions that you've identified in SPX 2334?

A. Well, if you mean have I gone around doing a count in a broader environment than just this case, I've done no counting exercises; however, the distinguishing feature of this analysis is entry by a

third party, and it's my general understanding that in pharmaceutical markets generally, in markets in a variety of industries where there are instances of litigation and patent litigation and the possibility of side deals with or without net consideration, that the possibilities of entry by third parties to the core patent litigations is commonplace.

Q. But entry by a third party is not the only condition required to satisfy the model that you've shown here, is it?

A. Well, I was wondering what else you had in mind by your question.

Q. I'm talking about all of the other conditions that are required to satisfy this chart.

A. Well, in this chart, there's actually no risk aversion assumed, and as I explained in my direct testimony, I actually think that's unrealistic, because it's generally the case that risk aversion is applicable in my view, but as I explained, this particular analysis which leaves out risk aversion in no way turns on whether or not there is risk aversion. So, the purpose of this analysis was to demonstrate the importance of the possibility of entry by a third party called to the attention of our fact finders here that under those generally important circumstances, it's

quite plausible that consumers would, in fact, be benefitted by settlements even if the allowed entry date under those settlements were to the later side of the mean probable date of entry and to call to the fact finder's attention in these cases as well as others that it may very well be the case that net consideration is vital in order for the parties to reach any settlement at all, and in particular, that payment of net consideration can enable the attainment of a socially beneficial settlement, particularly of benefit to consumers.

So, I think this is of importance quite generally within the assumptions that it makes which I think are generally relevant.

Q. Dr. Willig, you're not aware of any case, I take it, in which in the real world entry by a third party resulted in a gap between the generic and the incumbent which by failure of their -- of net consideration, they were unable to reach a settlement. Is that correct?

A. I've actually not done a study that would have enabled me to either find or not find a particular instance of negotiation where there were an impasse caused by the awareness of entry by a third party, but nevertheless, my analysis, which is here to replace

Bresnahan's analysis, shows that the Bresnahan rule derived from a framework without entry by a third party is really dangerous because it reaches the wrong general conclusion and is put forward by Professor Bresnahan, as well as those relying on his analysis, as being of general applicability rather than absolutely wrong in instances that themselves are based on generally applicable factors.

Q. Dr. Willig, doesn't your model in SPX 2334, in fact, show that a comparison of the mean probable date of entry under litigation to the settlement date would be subject to exactly the same criticism that you leveled at the Bresnahan rule?

A. How so?

Q. Well, isn't it the case, sir, I think as you pointed out in your direct, that there are settlements that you would consider to be pro-consumer that would be precluded by a test that compared the settlement date with the mean date of entry under litigation?

A. I think maybe you're characterizing my position wrongly or maybe you don't intend to characterize my position. What I was trying to say -- and see if I'm being responsive, please -- is that in this circumstance, and this is an example of the analytics, consumers would prefer settlements with entry dates

that go to the right-hand side of the arrow below the consumer box, which goes to the later side of the mean probable date of entry under litigation, and that some of those can be supported by the passage of net consideration, as could some settlements to the early side of the mean probable date of entry, and a rule against net consideration would cut off those settlements, but permissiveness toward the passage of net consideration would enable those settlements to be reached. It wouldn't stop them from being reached.

Q. Well, just to make sure we're understanding each other, Dr. Willig, in your report on page 10, you had said the only reliable way to determine if a particular settlement is harmful to consumers is to examine the specific features of that settlement and, in particular to determine if the date of competitive entry called for by the settlement comes before or after the mean date of entry under litigation.

That analysis, as I think you've shown here in your chart, would, in fact, preclude settlements to the right of the mean probable date of entry under litigation that you had described as pro-consumer, correct?

A. Oh, I see what you're saying now, Ms. Creighton. Thank you.

Q. So, to the extent that you have stated a test that you think would be applicable --

A. Um-hum.

Q. -- that test would fail under this model, correct?

A. I understand your question now, and let me explain. This is the one model where the impact on consumers is really more complex than the arrival of the entry date is in all of the other models that are worked through in the paper and demonstrated in the charts. In this model, when the consumer surplus impact on consumers is fully worked through, then, in fact, we get the result that's shown here that consumers can actually prefer settlements on the later side of the mean probable date of entry to litigation, and that comes out of the analysis of the impact on consumers through appropriate professional economic tools -- namely, consumer surplus -- and that's done in the analytics that are now, I hope, part of the record.

It's not exactly the same thing as the statistical mean probability -- mean probable date of entry under litigation, but if one goes to the consumer perspective and adjudges different dates of entry from the point of view of their impact on consumer surplus, which is the consumer perspective, then uses the

litigation probabilities, one attains the correct result.

Q. So, Dr. Willig, isn't it the case that to the extent that SPX 2334 could be viewed as a critique of Professor Bresnahan's test, it equally is proof that the test of comparing the mean entry date under litigation and the settlement date is not a sufficient test as well?

A. No, absolutely not. This analysis shows that in some circumstances in particular where there's entry by a third party, it's very important to assess the mean probable date of entry directly from the consumer perspective, which is to understand, for example, here that in the right-most, the end-most period of time within the patent life whether or not there are three players in the market, both the entering third party, the litigating entrant and the incumbent is of special concern to consumers, because in this analysis, when there are three, the price falls to a dramatically competitive level.

So, from the point of view of the consumer perspective, that's a particularly important stretch of time for the consumers to have availability of three competing sellers of the product, whereas in the earlier part, the issue was only whether there's one or

two, and that has a smaller impact on the consumer. So, when the consumer perspective is adopted as the applicable one, and that's what I keep trying to remind myself and you and the record, then, in fact, this analysis gives exactly the right answer from the point of view of consumers.

Q. Dr. Willig, in performing your analysis in this case, did you look for other circumstances in which there would be settlements that might be beneficial in your view to consumers that also would fall to the right, that is, later than the mean probable date of entry under litigation?

A. I don't know that I explicitly looked for them, but I think every time I did one of these analyses, a part of it was to understand the reservation date for consumers, and I think it's fair to say that every time we've seen a chart that showed that the reservation time for consumers was the mean probable date of entry, that that's the way the math came out.

Q. So, so far as you're aware, there could be other analyses that would show that even settlements later than the mean date of entry under litigation might be viewed as pro-consumer by your definition?

A. Well, I think the right way to go about the analysis is to take the consumer perspective and to ask

the question using the likelihoods of the underlying patent litigation going one way or the other way, hence the phrase "mean probable," that when those probabilities are applied to the consumer surplus measure, which accurately reflects the consumer perspective, which is the way I proceeded in all of my analyses, then one gets to the right answer.

Q. All right. Now, Dr. Willig, to find the range that you have on SPX 2334, you've made certain assumptions regarding where the line that is labeled "Consumers Who Expect Further Entry Prefer These Settlements to Litigation," that line doesn't necessarily have to be to the right of the mean probable date of entry under litigation under your algebra, does it?

A. No, actually, it doesn't have to. As I remember the analytics, there is an algebraic condition which governs whether or not the consumer arrow goes to the right of the mean probable date of entry under litigation, and under some algebraic circumstances it does, and under other algebraic circumstances it does not.

Q. Okay. And it's correct, isn't it, that in determining where the -- how far that consumer preference line falls, you would need to know some

additional factors, such as the total monopoly profit and total monopoly dead weight loss, total duopoly profit and total duopoly dead weight loss. Is that correct?

A. As I recall it -- I'm relying on memory here -- I think those algebraic representations do come into play in the analytics of where the consumer reservation date lies relative to the mean probable date of entry.

Q. Okay. So, to determine in SPX 2334 whether or not settlements are -- enhance consumer welfare or not, you would also need to know all of those factors, correct?

A. I'm sorry, could you repeat the question?

Q. Well, to determine under the circumstances shown in your chart, Entry by a Third Party, SPX 2334, you would need to know all of those additional factors, correct? You would need to know the monopoly and duopoly profit and dead weight loss?

A. Well, within the model -- let's see if this is responsive -- it is true that one could not tell quantitatively, algebraically where the ends of the arrow would lie within the model unless one had a quantification of the symbols in the model, but the purpose of putting this up and the purpose of doing the analysis is not to suggest that the fact finder should

somehow replicate my algebra with actual real world numbers.

The point of this analysis is to point out to the fact finder the importance of the factor entry by a third party and how that factor, among many others, all add up to the absolute unreliability and the danger of using the shortcut of just ascertaining whether or not there is positive net consideration.

Q. Well, but unless you figure out those factors, you don't know, do you, sir, whether or not the settlements, in fact, even if you calculated the mean probable date of entry under litigation, whether they are pro-competitive or whether they fall to the right and are anti-competitive, correct?

A. Well, in this case, if indeed the end of the consumer arrow is to the right, then just using the statistical mean probable date of entry under litigation, which is not the consumer perspective but a statistician's perspective, is conservative from the point of view of protecting consumers, but still, if one were to try to replicate what the chart displays in a sharp way would require some sort of quantification, which it is not my testimony is what the fact finder ought to be doing.

Q. But unless you do that calculation, isn't it

true, sir, that you would be potentially chilling pro-consumer settlements, just the same way as you've criticized Professor Bresnahan?

A. See, I don't see how that follows at all. Being permissive about net consideration doesn't necessarily drive the settlement that would be expected under that context to be in any particular right-most part of the orange bracket, if that's what you're somehow assuming by your question.

Q. No, I don't think I was assuming anything of the kind, sir.

If I can approach the chart again?

JUDGE CHAPPELL: Yes, you may.

BY MS. CREIGHTON:

Q. In order -- since we -- calculating the mean probable date of entry under litigation in this instance doesn't tell us whether a settlement is pro-competitive or anti-competitive, correct, because there could be settlements even to the late side of that line that under your diagram would be good for consumers, correct?

A. Right, and remember, the reason is that from the consumer perspective, the impact on consumers of the entry date of the litigating entrant actually changes depending upon its relationship to the time of

entry by the third party.

Q. Correct, but to know whether or not a settlement lies in the range that you've highlighted in orange or whether it lies to the right of that line and is not welfare-enhancing, you would have to know where the consumer expectation line ends, correct?

A. If one were trying to make that sharp a distinction as a process of law enforcement, then that would be so, but I'm not here to advocate that a fact finder be held to the task of literally quantifying this diagram and somehow using it within that format.

Q. Okay. So, you don't think a fact finder should be held to the standard of having to include any possibility that a particular rule would foreclose potential pro-consumer settlements. Is that correct?

A. No, I think that the right attitude for the fact finder is to avoid shortcuts where they're unreliable and dangerous and instead to employ best evidence on the subject of the impact on consumers of the settlement that's being scrutinized.

Q. Now, Doctor, we've been assuming for these purposes that the consumer expectation line will end to the right of the mean entry date under litigation, but your algebra doesn't compel that answer, does it? In fact, the consumer litigation line or preference line

could end short of the mean entry date under litigation. Isn't that correct?

JUDGE CHAPPELL: Hang on, Counselor. You asked him two questions.

MS. CREIGHTON: I'm sorry.

JUDGE CHAPPELL: Let's go one at a time.

MS. CREIGHTON: I was attempting by the second to explain the first.

JUDGE CHAPPELL: Susanne, read back the first question, please.

(The record was read as follows:)

"QUESTION: Now, Doctor, we've been assuming for these purposes that the consumer expectation line will end to the right of the mean entry date under litigation, but your algebra doesn't compel that answer, does it?"

THE WITNESS: No.

BY MS. CREIGHTON:

Q. And in fact, depending on the relationship between monopoly and duopoly profit and dead weight loss, the consumer preference line, in fact, could fall short of the mean date of entry under litigation, correct?

A. Yeah, this is the kind of case where using the statistical mean from the point of view of the

nameless, faceless statistician doesn't accurately reflect the consumer perspective, because the different stretches of time before and after the arrival of the third-party entrant have different impacts on the consumer, and as a result, taking the consumer perspective and looking at the mean probable date from the consumer perspective gives one answers that are different than what the statistician would label as the mean probable date of entry, which is what that bubble is pointing to on the chart.

Q. Okay. So, in the case where the consumer preference line ends at a date earlier than the mean date of entry under litigation, it would be possible for the parties to enter into settlements that were earlier than the mean date of entry under litigation, but, in fact, reduced consumer welfare. Isn't that correct?

A. Well, that wouldn't be so if the mean probable date of entry under litigation were construed from the consumer perspective, then that concept would coincide with the consumer's reservation date.

Q. But if mean probable date of entry under litigation were defined as you defined it in your report, that would be so, wouldn't it?

A. In my report, I include the consumer surplus

probability calculations of the very kind that underlie this discussion. So, my report is using the consumer perspective reliably in the analytics.

Q. Isn't it the case, sir, that calculating the mean date of entry under litigation the way we were describing, where you would look at the objective odds, the economic life of the patent, the shape and life of the market, all of those things this example shows wouldn't tell you whether a settlement that was either before or after that date was good for consumers, correct?

A. No, that's not correct, because the arrival of the third-party entrant is one of those features like the shape and size of the market, it's in that same category, that changes the consumer perspective and makes it different from the statistician's perspective on what is the mean probable date. Different stretches of time take on different significance from the consumer's perspective because of the entry of the third party.

Q. Okay. Well, if you're going to redefine the mean probable date of entry under litigation to include the consumer perspective, then you are going to need to know all those factors we just talked about about duopoly profit and dead weight loss, monopoly profit

and dead weight loss, correct?

A. Well, one would need to take into account in whatever is the applicable fashion the way that these factors bear on the welfare of consumers, and if one has the appropriate target, namely, impact on consumer welfare, which is the right standard, although sometimes a challenging one to meet, under that standard, where these factors are important and change the consumer perspective in the sense of making it different from the statistician's perspective, it's the consumer's perspective that is the relevant one for judging competitiveness.

Q. Now, sir, you would agree, wouldn't you, that the overwhelming percentage of cases settle?

A. In general, I think that's right.

Q. And that's true of all types of disputes, including patent disputes, correct?

A. I imagine that's true, but I'm not -- I'm not really sharply a student of those numbers.

Q. Well, if I told you that there was testimony a few days ago from one witness that he had a database in which 45 of 50 patent cases settled, would you have any reason to think that those numbers are way off, based on your understanding?

A. I'm sorry, what did you did say, 50 cases

settled?

Q. Forty-five out of 50 cases settled.

A. Oh, I see. That doesn't surprise me.

Q. Now, considering the consumer welfare of either a test that looks at the mean entry date under litigation or some other test, it would be appropriate to look not only at the effect of that rule on cases that don't settle but also potentially on cases that do, correct?

A. Yes, I would say that's fair.

Q. And when you were advocating in your report that the only way to determine whether a settlement is good for consumers or not was to compare the mean entry date under litigation with the settlement date, you weren't imposing a screen that would only apply that analysis to cases where there otherwise wouldn't be a settlement, correct?

A. I'm confused by your question. I think I explained this morning that there are two applicable standards of comparison that arise from my analysis. One is litigation, as the alternative to a particular settlement that's being analyzed, and the other might be an alternative settlement if there were direct evidence of the practicality of some alternative settlement for the purpose of the comparison from the

consumer perspective.

Q. Let me ask the question this way, Doctor: In the 45 cases out of 50 that settled, hypothetically, would you allow the payment of net consideration so long as the settlement date was short of the mean probable date of entry under litigation?

A. I'm not here to offer a rule, but I am here to say that I think it would be generally a bad idea, dangerous, to adopt a rule against net consideration as applied to all 50 of those cases that you're mentioning.

Q. Okay. Now, in your expert report, in your testimony today, you focused on the benefit of a rule with respect to its effect on permitting settlements in the five cases out of 50, correct, the cases that wouldn't settle otherwise?

A. The cases that wouldn't settle otherwise? That question in a way presumes that I have information or a view on whether the 45 cases that settled involved some form of net consideration or side deal or not, and I'm just not apprised of that.

Q. Okay, I thought I heard you say in your direct testimony that you thought it would be a mistake to prohibit patent splits with net consideration because those payments might very well be essential to the

settlement, correct?

A. Yes, to good settlements, um-hum.

Q. And you were focused, weren't you, principally on the effect of a rule on those cases where net consideration might otherwise be essential for settlement, correct?

A. That is what I was able to show, which to me totally overturns the analysis put forward by Professor Bresnahan in support of the so-called Bresnahan rule, as well as reliance on that rule by complaint counsel to the extent that complaint counsel is so relying.

Q. Did you consider what effect your rule of allowing net consideration would have on cases in which settlements otherwise would occur?

A. I understand that changing the rules would have an impact both on cases that would otherwise not settle at all or find some other settlement as well as cases that would find settlement, but I think in this totally unsettled area, the harm that is clearly identified here from a rule that is dangerous within its own four corners, having identified those dangers, we as a policy community should pay attention to that.

Q. Okay, but would you agree that if a rule resulted in settlements that lower consumer welfare in the majority of cases that would otherwise settle, that

that would be something that a policy maker would want to take into consideration?

A. Well, yes, I think in general when economists think about per se rules or inflexible general rules, economists do think about this from the decision-making point of view of public policy. We understand that one should be thinking through a balance between what we call type one and type two errors, errors of omission and commission, and we also understand that as a general framework for such analyses that it's only on the basis of a great deal of experience pointing toward a conclusion that an inflexible or a per se rule would generally improve things and hardly ever harm things, and then it might follow that a per se or an inflexible rule would be warranted.

What worries me here is that Professor Bresnahan, perhaps complaint counsel, puts forward a new, very inflexible, nearly per se rule without there being a great deal of experience about it, hardly any I would say, and with there being now, due to my own work and the understanding of others, that there's a very serious potential downside from this rule.

Q. Dr. Willig, wouldn't you agree that if there is an adverse effect on consumer welfare from a rule that allows net consideration on the majority of cases, that

that would be something that would be -- you would want to point out in your report or your testimony?

A. I think if I knew on the basis of experience that the harms that I had identified were likely to be overwhelmed by opposite impacts on the other side, and if I knew that based on sufficient experience, I would be offering a different conclusion.

Q. Okay. Well, isn't it true, Dr. Willig, that your report is entirely silent with respect to the effects of a rule that allows net consideration, harmful or otherwise, on cases that otherwise would settle?

A. No, it's true that I myself am aware of the newness of the inquiry and the novelty of the questions here that are posed. I'm aware also of the absence of experience on the part of the policy community, courts, the agency, economists who think about these things, and that we are way, way short of the kind of experience and the kind of knowledge of the balance of harms and benefits that would ordinarily suggest that it was appropriate to adopt a new inflexible, nearly per se rule of the kind that Professor Bresnahan is putting forward here.

Q. One important part of Professor Bresnahan's analysis relates to the incentives of the parties if

payment of net consideration is permitted, correct?

A. Yes.

Q. And yet you didn't think it appropriate to address the effect of that incentive on the majority of cases that would settle without the payment of net consideration, correct?

A. No, I'm well aware, and it shows up in my own analytics, that there are opportunities for the parties to employ net consideration in a way that would push the applicable entry date to the right-hand side of the area where consumers benefit and that it might, in fact, be profitable for the negotiating parties to move their deal in that direction if there were no reason for them to experience any breaking forces in the opposite direction. I think I covered in my report that the understanding of antitrust and of the need to be cautious about the use of net consideration, in part because of legal considerations, is a contrary force that can be expected to stop parties from just running willy-nilly in the anti-competitive direction with the use of net consideration.

Q. Dr. Willig, Professor Bresnahan isn't the only economist involved in this case who has thought that it was possible not to have to do a comparison of the mean data of entry under litigation with the settlement,

correct?

A. I'm not sure who you're referring to.

Q. Let me show you what's been marked as CX 708. It's a report of Carl Shapiro.

If I may approach, Your Honor?

THE WITNESS: Thank you.

MS. CREIGHTON: Your Honor, would you like a copy?

JUDGE CHAPPELL: Are you going to put it on the ELMO?

MS. CREIGHTON: Yes.

JUDGE CHAPPELL: I don't need it, thank you.

BY MS. CREIGHTON:

Q. Dr. Willig, this is one of the documents that you reviewed in connection with preparing your expert report, correct?

A. I believe that's right.

MR. SCHILDKRAUT: Objection, Your Honor, as to the use of this report. I was not allowed to use Mr. Fliesler's deposition. Mr. Shapiro -- Carl Shapiro is not testifying here. I don't see why -- why complaint counsel should be able to use this report.

MS. CREIGHTON: I'm using it, Your Honor, to confront the expert and probe the scope of his testimony with respect to the only reliable way to

analyze these settlements is the way that he's identified, and I want to probe that by confronting him with the opinion of another expert, which is one of the documents that he reviewed and identified in his expert report as a basis for his opinion.

JUDGE CHAPPELL: Is this a document he considered and relied upon in forming his opinion?

MS. CREIGHTON: Yes.

MR. SCHILDKRAUT: No, he reviewed --

MS. CREIGHTON: I'm sorry, well, he listed it as a document he reviewed. I'm not offering -- I'm not offering it into evidence, Your Honor. I'm just seeking to use statements that were in this report which he has reviewed and is familiar with and confront him with it and see what he says about the limits of his analysis.

MR. SCHILDKRAUT: And I -- it seems to me to be the exact same context as the deposition of Mr. Fliesler, which I was not allowed to use.

MS. CREIGHTON: But I'm -- I beg to differ, Your Honor. He was seeking to introduce the statement of Mr. Fliesler to have him adopt it and sort of endorse it. I'm using this to confront the witness. I have been informed that -- I was not here in court -- that this exact document was used in cross examination

with Professor Bresnahan.

JUDGE CHAPPELL: Right now I'll sustain the objection until I hear a better foundation.

BY MS. CREIGHTON:

Q. Dr. Willig, have you seen this document before?

A. I believe I did see it before, yes.

Q. And let me show you attachment 1 to your report.

If I might approach, Your Honor?

JUDGE CHAPPELL: Yes.

MR. GIDLEY: Susan, could I get a copy?

MS. CREIGHTON: Oh, I'm sorry.

MR. GIDLEY: I'm a little bit more hidden than usual today. Thank you very much.

BY MS. CREIGHTON:

Q. That copy's a little obscured here, but it is Exhibit CX 708, the same as the document you identified -- strike that.

Attachment 1, can you please identify it, Dr. Willig?

A. Oh, attachment 1 was an attachment to my report listing materials considered.

Q. All right. And listed on attachment 1 is, "Economic Analysis of the Key-ESI Patent Settlement by Carl Shapiro, March 20, 2001."

Do you see that?

A. Yes, I do.

Q. Is that the same as the document I've handed you that's marked CX 708?

A. As far as I can tell by a quick look, yes.

Q. So, is this report something that you considered in connection with preparing your report in this case?

A. The word "considered" is -- I certainly reviewed it.

Q. All right.

A. I read it at one time.

Q. At the top of Attachment 1, it says, "Materials Considered." Was this, in fact, considered by you in connection with preparing your report?

A. Well, in the sense of "reviewed," yes. The other word that you used, if I may add, "relied upon," absolutely not.

MS. CREIGHTON: Your Honor, I would like the opportunity to confront this witness with this document.

MR. SCHILDKRAUT: I renew my objection, Your Honor.

JUDGE CHAPPELL: If he's got it listed on Attachment 1, Materials Considered, I'm going to allow

her to question him. You can object if you hear a question you don't like.

Go ahead.

BY MS. CREIGHTON:

Q. Dr. Willig, did you review this report?

A. I did.

Q. Was it your understanding that when it says, "Economic Analysis of the Key/ESI Patent Settlement," that that was a reference to the Schering-ESI patent settlement that's at issue in this case?

A. Yes.

Q. And Carl Shapiro is a professor of economics at the University of California, correct?

A. I'm not sure that's his title, but I know he's at the University of California, Berkeley, he teaches in the business school, so he may have a different title, but --

Q. All right, okay. And a few years ago he was the chief economist for the Antitrust Division of the Department of Justice, correct?

A. Yes, he was.

Q. Directing your attention to the footnote, which may be very hard to read here, but I'll read it --

JUDGE CHAPPELL: Counsel, I am going to allow you to test his data and underlying assumptions but not

to force this other expert's opinion into evidence.

MS. CREIGHTON: Yes, Your Honor.

JUDGE CHAPPELL: Just so we're clear.

MS. CREIGHTON: Yes, Your Honor, I just want to identify who he understood this to be coming from. This is the last question along these lines.

BY MS. CREIGHTON:

Q. The footnote says, "This paper was prepared for the Federal Trade Commission on behalf of ESI Lederle, Inc."

Was it your understanding that this was prepared in that connection?

A. That doesn't surprise me, but I wouldn't necessarily have known that.

Q. Okay. It was your understanding that Professor Shapiro offered an analysis different from the one you provided in your testimony here today, correct?

A. Well, it is different in the sense -- in many senses, but, for example, you directed me to that first footnote. Right below it is another footnote that in some sense immediately separates what Professor Shapiro did for his analysis from what I did with mine. The footnote says that -- this is Professor Shapiro speaking, "My analysis below does not include some of the benefits that result from settlements; the

resolution of uncertainty (I assume the parties are both risk neutral, not risk averse) and the benefits to the court system from settlement, including both the direct costs of operating the court system and the benefits from relieving congestion in the courts. Inclusion of these benefits, which clearly factor into any evaluation of public interest, are beyond the scope of my analysis."

So, evidently the scope of his analysis was quite different than the scope of my analysis.

JUDGE CHAPPELL: Let me clarify something on the record.

Would you stand up, please, sir?

MR. SCHILDKRAUT: Yes, sir.

JUDGE CHAPPELL: Something I think you failed to mention earlier. There is a substantive difference in trying to bolster your expert's opinion on direct examination and someone cross examining someone else's expert with a document, just so we understand that.

MR. SCHILDKRAUT: Yes, sir.

JUDGE CHAPPELL: That's the basis of my ruling.

MR. SCHILDKRAUT: Okay.

JUDGE CHAPPELL: Thank you.

BY MS. CREIGHTON:

Q. Professor Shapiro, in fact, looks at a

comparison of the settlement entry date and the date of entry under litigation, correct? Is that your understanding?

A. Well, I first reviewed this some time ago, and I did not review it just now sufficiently, but as I was just flipping through it to see if I recognized it, it seems that right up on the second page, Section A is called Patent Strength, and he seems to be saying, and I quote, "To assess what consumer welfare would have been under ongoing litigation inevitably requires some estimation of the likelihood that the patent would have been found valid, enforceable and infringed by the other party to the settlement. I call this likelihood patent strength, ranging from zero, worthless, to 100 percent, ironclad," and he goes on to say, paraphrasing the next few sentences, patent strength may be difficult to assess, but there's no getting around the need to do so in order coherently to evaluate the antitrust implications of settlements. So, in that respect, we're not that far apart.

Q. I think that was the part I was referring to, but then he goes on, and I would like to direct your attention to page 5 of the report, where he develops his consistency check, and in particular, the third paragraph. It states:

"There is a genuine consistency check on the Key side."

That would be the Schering side?

A. Uh-huh.

Q. "One can reasonably ask why Key would agree to let ESI into the market after only 40% of the relevant time period, if Key indeed believed its patent to be nearly ironclad. The Appendix develops this consistency test. Basically, the test boils down to the following common-sense question: Did the patent holder on net pay more to the challenger than it would have incurred in litigation costs had the two parties litigated rather than settled? If the patent holder believed it was giving up more in value than it was saving in litigation costs, one can reasonably infer that the patentee was getting something else out of the settlement, namely a later expected entry time than would have arisen from litigation."

Do you agree with Professor Shapiro's consistency check?

A. No, as you could predict, absolutely not. His so-called consistency check, to the extent it's founded in an analysis, it's clear from that earlier footnote that I just read to you that part of what he is assuming away that causes him to reach this particular

part of his conclusion is risk aversion as well as the other benefits of settlement to society.

He also does not consider the case of pessimism on the part of the incumbent, nor the case of third-party entry, all of those being circumstances which I analyzed in my far broader work and all of which show the inapplicability of his conclusion in only a slightly broader framework.

Q. All right. Well, Dr. Willig, would it be fair to say, then, in circumstances where there was no finding of risk aversion or third-party entry or pessimism, that Professor Shapiro's test would be an appropriate one?

A. No, not at all. It's not a question of whether there's a finding of risk aversion and the other things that you mentioned. I think Professor Shapiro is perfectly clear even from his point of view that he's assuming away something which might ordinarily be presumed. He just chooses not to include it for whatever reason.

He also doesn't consider either via footnote or by inclusion the idea of pessimism, which as we've discussed shows up in Professor Bresnahan's report, not analyzed, but at least accepted as a possibility that might be but is not considered, and it doesn't show up

in this paper as being considered at all, as well, and the same applies to third-party entry.

Q. Well, suppose that one were to adopt something like the Shapiro rule as a presumption and then say if somebody could come in and prove, well, this rule isn't a good one, because, in fact, there's entry by a third party or there's relative pessimism, what would be your opinion of that rule?

A. I still think that's a dangerous rule. It puts the burden on the wrong party. If one imagines a party to a patent litigation trying to reach a settlement finding that there is an impasse and then considering the possibility of a side deal linked to the settlement of the patent dispute, and all of a sudden being advised by counsel, well, since the presumption goes against risk aversion under, say, the proposed FTC version of Professor Bresnahan or Professor Shapiro, so you have to act here as if you don't mind risk.

Now, can you still settle the case under the proviso that you need to demonstrate somehow your risk aversion? Otherwise, you're in legal trouble. That seems to me a kind of legal posture that would be dangerously chilling of the settlement process and thereby lead to the kind of danger that I discussed in my direct of cutting off the possibility of reaching

socially advantageous settlements.

Q. Okay. So, your testimony, Dr. Willig, is that you would apply a test of the presumption of legality to the payment of net consideration?

A. Not at all, absolutely not, I did not say that. I think the correct presumption is that risk aversion is part of the environment in the context of negotiations to settle underlying litigation, where it's well understood that one of the main reasons that parties attempt to settle litigation is to get rid of the risk that otherwise imposes costs on them.

Q. Dr. Willig, Janusz Ordover is an economist that was designated but has not been called by Upsher in this case. Is that correct?

A. He is an economist. I don't know his status with Upsher.

Q. He is someone with whom you've co-authored articles?

A. Absolutely.

Q. He is a professor of economics at NYU, correct?

A. Yes, he is.

Q. He was also chief economist for the Antitrust Division some years ago, correct?

A. Yes, he was.

Q. Now, Professor Ordover has stated that you told

him that you read his report in this case. That's correct, isn't it?

A. I'm sorry, say that again.

Q. Professor Ordover said that you had read his report in this case. That's correct, isn't it?

A. I don't know if he said that.

Q. Is it correct? Did you, in fact, read his report in this case?

A. I'm not sure now that you mention it.

Q. He said that you had said that it was a good job. Does that refresh your recollection?

A. Absolutely not.

Q. So, you have no recollection of having read Professor Ordover's report in this case. Is that correct?

A. I actually do not have that recollection, but if I could see it, perhaps that would help.

MS. CREIGHTON: Your Honor, this would be a good time for a break, but if you would prefer for us to keep going, that would be fine as well.

JUDGE CHAPPELL: How much more cross do you have?

MS. CREIGHTON: I would guess 45 minutes to an hour, Your Honor.

JUDGE CHAPPELL: Okay, then let's take a break

until 4:30. We're in recess.

(A brief recess was taken.)

MS. CREIGHTON: May I approach, Your Honor?

JUDGE CHAPPELL: Yes, you may.

According to my thermometer, it's only 79 degrees in here.

BY MS. CREIGHTON:

Q. Dr. Willig, I've handed you what's been marked as CX 1716. Does reviewing this document refresh your recollection as to whether you've seen it before?

A. I haven't yet reviewed it.

Q. I'm sorry?

A. (Document review.) I do recall having reviewed something of this character. I can't tell you from my three-minute review just now whether it was the entire document or fragments thereof or an electronic version, but as I'm reading through very quickly some of the articulations of the conclusions here, I recognize the language, I recognize the hand of Professor Ordover. So, I do feel that I have reviewed some form of this in the past.

Q. Okay, let me direct your attention to page 10 of his report, paragraph 20, see if you recall having reviewed that.

A. (Document review.) I have to tell you that I

do not sharply recall the language of paragraph 20. That doesn't mean that I didn't read it or review it in the past. It just means that my memory is limited or perhaps I did not. I just really don't know.

Q. You can put that aside, Dr. Willig.

Do you recall before the break, Dr. Willig, having said that you did not believe that there should be a presumption that payments with net consideration should be permitted?

A. I'm sorry?

Q. Let me just ask the question again, probably be quicker.

Do you think there should be a presumption that settlements with net consideration are permissible?

A. Ah, I'm a little bit worried about the context of the word "presumption." That sounds more legal than I care to put myself into the context of here. My attitude generally is that when it comes to settlements of underlying litigation, patent litigation in particular, which entail net consideration, that the net consideration itself should not be viewed as a red flag, in essence per se violation, even given monopoly -- the first two legs of the Bresnahan three-part test that I assumed in my own analysis.

On the other hand, I do think that agreements

to settle patent disputes that entail a split where there is net consideration ought to be open to scrutiny by antitrust authorities and that there should not be some sort of a per se blessing or a safe harbor for agreements with net consideration. Rather, they should be subject to scrutiny under the only standard that I'm aware has any reliability here as a matter of policy, and that is looking for the impact on consumer welfare.

Q. All right. Let me direct your attention to page 15 of your deposition, lines 18 to 24. You're talking about Professor Bresnahan's analysis.

A. I'm sorry, page 15 did you say?

Q. Yes, and you state:

"I also think it's wrong of him to advance the view, as he has, that the mere fact of passage of net consideration is indicative of an anti-competitive agreement, and instead, I think the proper presumption is the opposite, but in any event, certainly the character of the agreement ought to become a valid object of analysis in a case of this kind."

Do you recall giving that answer?

A. It sounds fine, and what I mean by "opposite" here, as I read it and as I somewhat recall the episode of our deposition, is that it shouldn't be viewed as indicative of an anti-competitive agreement, and the

opposite presumption is appropriate, that is, it's not a free pass either, but it's certainly not a red flag that should cause an agreement that contains it -- even given the first two legs of the Bresnahan test, it should not be viewed as something that's just per se condemned.

Q. You also think it shouldn't be presumed to be pro-competitive, right?

A. It shouldn't be a free pass for the agreement; rather, it's an element of the agreement, and if it is the view of the antitrust authorities and the fact finder that the agreement in its totality is anti-competitive, is adverse to consumer welfare in the context of monopolization, then I do think that agreement should be open to legal attack.

Q. Dr. Willig, you've personally never attempted to apply your economic analysis to a settlement, correct?

A. I'm sorry, to?

Q. To a settlement involving payment of net consideration, correct?

A. Anywhere, what do you mean, in this case?

Q. Either in this case or otherwise.

A. In this case, I did not look at the facts and try to reach a conclusion about whether or not these

agreements are pro or anti-competitive.

Q. You also haven't attempted to apply your test in any other circumstance, correct?

A. Well, I'm hesitating because I have been and perhaps even am right now involved in some other matters where intellectual property is part of the issue, and I actually -- I haven't particularly thought through whether I could characterize my work in those other matters as standing clear of reaching a conclusion about whether the agreements entailed there are pro-competitive or not. So, I hesitate to characterize my work in other cases as so without thinking it through, but here, I have certainly not come to a conclusion about these particular agreements; rather, I'm confining myself to the methodology underlying what I view as Professor Bresnahan's approach.

Q. You're not aware of anyone ever having done a comparison that you propose with respect to any settlement agreement apart from yourself, correct?

A. My understanding is that this entire area is pretty fresh. There may be a few FTC cases, which I haven't studied very intensively, but my general education is that there's not a lot of familiarity and experience by the legal and economic communities in

analyzing agreements of this kind.

Q. So, is the answer that you're not aware of anyone having applied the comparison that you propose to any settlement agreement?

A. I'm not sharply aware of any other case where there was a patent-splitting agreement with a side agreement and where somebody performed a test using economics or more broadly trying to gauge impact on consumer welfare through the kind of lens that I'm suggesting here.

Q. Well, you're not aware of that analysis being applied under circumstances outside of litigation, correct?

A. Outside of litigation? No, I think not.

Q. Okay. So, you don't have any idea, do you, sir, whether that standard can actually be applied, right?

A. Well, the basic standard that I'm advocating is a relatively standard Section 2 rule of reason approach that says, look, it's -- it's our privilege to have antitrust laws that direct the agencies and the courts to protect consumer interest against undue monopolization, and it's never an easy standard. There's lots of situations where -- there's pros and there's cons and there's facts that point one way and

facts that point the other way, and economics can be very helpful, but it really comes down to a mixture of the facts.

This is a very familiar circumstance to economists, to me personally, in the sense of using the antitrust laws to protect consumers against practices which have a fundamental ambiguity about them, but one thing is clear is that we steer away as best we can from using per se treatment of certain features of business conduct in the Section 2 context where there's as much potential for harm as there is for gain to the consumer.

Q. Okay. It was a simple question, yes or no. Let me ask a different question.

A. Is that a question, because I know my answer to that characterization of your question is not quite.

Q. Isn't it true --

A. We do have experience with Section 2 analyses.

Q. Okay. Isn't it true, sir, that you're not aware of anyone in litigation or outside of litigation having attempted to apply the standard that you propose to a settlement with net consideration?

A. I think that's probably fair. What I was trying to point out in my last answer is --

Q. Actually --

A. -- that we do have a lot of experience with Section 2.

Q. And Mr. Schildkraut can ask you about that.

We talked earlier about the importance of determining the objective odds of litigation. You've personally never attempted to assess the objective odds in any patent case, correct?

A. That is correct.

Q. You've never conducted research or published articles on the subject, correct?

A. Correct.

Q. You don't consider yourself an expert in that area, do you?

A. No.

Q. And you're not aware of any empirical research in that area, correct?

A. I can't say that I am, but that doesn't mean it doesn't exist.

Q. So, you don't know whether such an assessment is a valid and reliable measure of what the outcome from the trial of a case will actually be, correct?

A. I think it is correct to say that I'm not aware of any research on whether or not an expert in subject matter technology can arrive at an opinion about the odds of a patent case prevailing where those opinions

have been compared to the actual outcomes of the cases, but I would say in general that there are people, individuals, who portray themselves and who are generally trusted as having something expert of value to say on such subjects.

Q. You don't know whether the reliability of an assessment of litigation odds would be affected by how early or late a case settles, correct?

A. I don't understand the question.

Q. Well, are you aware of any research that addresses the question of whether an assessment of litigation odds early in a case compared to late in the case affects the reliability of such an assessment?

A. Oh, I see. I think I understand. So, you're asking me whether if an outside expert were to review the facts --

Q. Correct.

A. -- as best they're understood earlier rather than later, would that expert have a better shot as being accurate than the later side?

Q. Are you aware of any research or analysis as to that?

A. I'm not aware of any professional research that goes to that question, but it would make sense as an economist to understand that the more information

that's available to the expert making the assessment, that that can only improve the accuracy of the assessment.

Q. There's nothing in your analysis that takes that kind of variability into account, correct?

A. The variability in the accuracy --

Q. Of an assessment of litigation odds.

A. And how it might depend upon time?

Q. And how that might affect whether it would be decided that a settlement is pro or anti-competitive.

A. Well, I do think when I state that my best advice that I can articulate on an approach to resolving issues of the kind of -- judging whether an agreement is pro or anti-competitive, my overall position is no shortcuts, look at the impact on the consumer, look for best evidence, and in particular it makes sense to look at the underlying strength of the patent case.

I think when I articulate a standard like that, it's implicit that I understand, by saying "best evidence," that part of the fact finder's task is to assess different kinds of evidence and give them due weight according to the assessment of the reliability of that kind of evidence in the setting of the case. So, I don't think I'm thoroughly avoiding understanding

that sometimes it will be relatively unclear and sometimes relatively clear in the fact-finding context about what is the underlying strength of the patent litigation.

Q. So, if a comparison of the mean date of entry under settlement and the -- I'm sorry, the settlement date and the mean date of entry under litigation is not determined, you would agree that it's appropriate for the fact finder to consider other evidence that might be dispositive, correct?

A. I think an open-ended standard is certainly appropriate at this point.

Q. Okay. So, under those circumstances, it would be possible for the fact finder in your opinion to conclude that the agreement was anti-competitive, right?

A. I think it's possibly appropriate for the fact finder to find an agreement is anti-competitive by making use of the totality of the evidence, including evidence on the strength of the underlying patent litigation, and giving due weight to the different forms of evidence.

Q. One of the facts that you would consider relevant is whether there was an attempt to mask the character of this, correct?

A. I think that might be relevant.

Q. If there is clear evidence of an attempt to mask the character of a side deal and corresponding evidence that the masking is related to the creation of a longer period of monopoly power in a relevant market, that would be salient for the fact finder to consider, correct?

JUDGE CHAPPELL: Ms. Creighton, you don't have to go so slow as to dictate. Just slow down a little, and speak up, please.

MS. CREIGHTON: Yes, sir.

BY MS. CREIGHTON:

Q. Were you able to follow the question?

A. I think so.

Q. Is that a correct statement of your opinion?

A. I think that's right.

Q. Okay. Another factor that you would consider relevant is the size of the net consideration relative to the overall market, correct?

A. Yes, I think that's a factor.

Q. I'd like to look at another one of your charts, with the indulgence of Mr. Schildkraut, the Cash-Strapped Generic chart.

Now, this is -- this chart, which I think has been identified as SPX 2332, is one of the models in

which you've assumed that the incumbent is risk averse, correct?

A. This chart does show risk aversion on the part of the incumbent, yes.

Q. Okay. If I can approach the chart, you've shown the incumbent's reservation date, the earliest date they would accept, to the left of the mean probable date of entry under litigation, correct?

A. Yes.

Q. But to make that assumption, you're not just assuming that the incumbent is risk averse, correct?

A. I don't know what you mean.

Q. In addition to assuming that the incumbent is risk averse, you're also assuming either that the incumbent is not optimistic or that risk aversion or other litigation costs so swamp its optimism as to push this date earlier than the mean probable entry date, correct?

A. You're right in reminding the record, which is fine, that this demonstrative is based on the situation where, in fact, both the litigating entrant and the patent holding incumbent have the same accurate views of the underlying odds of the patent litigation going one way or the other way.

Q. Okay. And that's true of some of the other

demonstratives that you have here, too, isn't it, that it's not necessarily the case that just because you have a risk averse incumbent, that you're necessarily going to have a reservation date earlier than the mean date of entry under litigation?

A. You're right that if one mixes many different factors together, factors that were highlighted in these different models, then all the different forces could come into play simultaneously.

Q. Okay.

A. So, as you say, for example, if the incumbent here were pessimistic as well as risk averse, that would tend to move the reservation date even more to the left, or if there were a mix of optimism along with risk aversion, that would tend to push the end of the arrow to the right to the extent the optimism governs and to the left to the extent that the risk aversion governs.

Q. Okay. So, as it is shown in this exhibit, we're assuming some mix of either relative conservatism in the assessment of odds or relative -- relatively higher degree of risk aversion or litigation costs, correct, to get the date earlier than the mean entry date under litigation?

A. Well, to be fair to the specificity of the

demonstrative, it is based on an analysis of a -- one of the cases that I've worked through, and in that case, the probabilities that the two parties might prevail in the patent litigation are viewed by the two parties as being the same and are both viewed as being realistic by the outside analyst.

Q. Okay.

A. So, there is no optimism, no pessimism, just risk aversion and other litigation costs.

Q. But optimism is pretty frequent in litigation, correct?

A. It might very well be, yes.

Q. Okay. Now, all else equal, risk aversion and litigation costs, by pushing the incumbent's reservation date earlier, will tend to make settlements more likely, correct?

A. It gives settlements a wider span of possible entry dates that might be mutually acceptable.

Q. Because the incumbent's date is getting closer towards the entrant, correct, that's the --

A. If we hold the entrant's date fixed, yes.

Q. So, in an example like this one, there's two things going on. There's both risk aversion that exceeds the incumbent's optimism, or -- in a case where they're not optimistic, plus something that keeps the

entrant from being able to meet the incumbent even under those circumstances, correct?

A. When you say "this case," if you're referring to my demonstrative, I just want to repeat myself that this demonstrative is an illustration of a very specific analysis that I've done, and as I've explained, that analysis presumes, because this analysis is focusing on the cash-strapped element, this analysis presumes realism in the understanding of the odds of litigation by both the incumbent and the entrant.

Q. Okay. So, if we weren't in a situation where it was a cash-strapped generic, so if this is just the entrant's line, absent that, what would be the effect of risk aversion by the entrant?

A. Risk aversion by the entrant would push the -- his or her reservation time to the right.

Q. So, it moves it closer to the incumbent, correct?

A. Yes.

Q. Okay. So, all else equal, risk aversion by the parties tends to push them closer together, correct?

A. All else equal, yes.

Q. Okay. And so in this model you've assumed something that keeps the entrant from having a date

that's far enough in time to meet the incumbent even though it's risk averse, correct?

A. This demonstrative reflects the condition of there being a cash-strapped generic potential entrant.

Q. Okay. And in this example, as in your earlier one, net consideration enables settlements anywhere in the range from the beginning of your orange range identified as viable welfare-enhancing settlements with net consideration all the way over to the right to the end of patent life, correct?

A. I'm not sure what your question was. The orange bracket reflects the settlements that are acceptable both to the entrant and the incumbent and are also favorable for consumers. That's what the orange area does.

Q. Right, and what net consideration enables is settlements anywhere in this range, correct?

A. Conceivably with net consideration of varying amounts, there could be mutually acceptable agreements for the entrant and the incumbent that move to the right. That's not to say that they would actually go there in view of other considerations, like sensitivity to antitrust, but nevertheless within the model those are viable settlement dates as well.

Q. Okay. And when I said "this range," I was

referring to from the furthest early entry point of viable welfare-enhancing settlements with net consideration over to the end of patent life. Is that what you understood?

A. About what?

Q. That was what you were answering, is that there could be settlements potentially in this range depending on the size of net consideration, correct?

A. There could be settlements that -- wide to the right of the mean probable date of entry under litigation for different amounts of net consideration.

Q. All right. Now, the -- in this demonstrative, the incumbent's reservation date, as you've shown it, if the parties are able to use net consideration, the earliest feasible, viable entry date in such a settlement would be strictly later than the incumbent's reservation date, correct? It would be to the right. It would be somewhere in the range you've highlighted in red, correct?

A. I don't think it is correct the way you said it.

Q. Okay.

A. I'll explain again if you like and see if it's responsive.

Q. No. Well, isn't it correct that there are --

whether or not this viable welfare-enhancing settlements with net consideration, whether that exists in a particular case or dates earlier than the mean probable date of entry under litigation makes some assumptions about the difference between monopoly profits and the sum of duopoly profits?

A. It's certainly true that within this model -- this is not always the case -- depending upon parameters like the ones you mentioned, whether or not net consideration can actually close the gap, and, in fact, there are examples of a cash-strapped generic potential entrant coupled with a risk averse incumbent where the risk aversion is sufficiently great and the cash-strappedness is not sufficiently severe that they actually close the gap just because of other facts.

On the other hand, the gap may be so large that there is still no settlement available with net consideration that does entail a settlement date to the early side of the mean probable date of entry under the litigation. All of these possibles are alive within the analysis.

Q. But in particular, in SPX 2332, to have the viable welfare-enhancing settlements with net consideration, that possibility, the assumptions that you've made are assumptions about risk aversion by the

incumbent, cash-strapped generic and differences in the relationship between monopoly and duopoly profits, correct?

A. I think those are the salient parameters that undergird these different cases, yes. There may be some others, too.

Q. Okay. And are you aware of any settlements or cases in the real world that were unable to settle because there was a gap in the ability of the parties to bridge their differences because they weren't able to pay net consideration?

A. No, I don't have empirical evidence on that or whether that has arisen in some actual case due to the fact that the entrant is or was cash-strapped. I just don't have that kind of experience, and I'm not sure the community does as well.

Q. All right. Let's look at your demonstrative Varied Assessments of Success, SPX 2333.

This demonstrative pictures another situation in which you think that Dr. Bresnahan's rule falls short, correct?

A. Oh, yeah.

Q. Okay. The reason that the incumbent's reservation date is earlier than the mean probable date of entry under litigation in this case is because

they're pessimistic, correct?

A. That is correct.

Q. So, for example, that would be true if an incumbent thought its odds of winning were 30 percent and, in fact, they were really 50 percent, correct?

A. Right, where it is we, the outside analysts, who know the 50 percent number to be right, and where the best estimate of the incumbent in these actual circumstances is, as you say, 30 percent.

Q. Okay. Now, in a -- so, the -- since the generic and the incumbent parties don't have the benefit of our omniscience, the generic thinks that the mean entry date under litigation is here at the right arrow, correct?

A. Right.

Q. So, its reservation date is the furthest point to the right of the range you've labeled "Optimistic Generic Will Only Accept These Settlements," right?

A. Will only what?

Q. Will only accept these settlements, correct?

A. Correct.

Q. And the pessimistic incumbent, similarly, thinks that the true mean entry date under litigation is here at the furthest left of the range you've marked the "Pessimistic Incumbent Will Accept These

Settlements," correct?

A. The true mean, yes, but, of course, both of them may be aware of that they may be optimistic and they may be pessimistic and they may be realistic. They only form their best estimate without necessarily having a great deal of certainty about their estimate, but they may still find their estimate to be their best estimate.

Q. It's the best they've got, right?

A. The best they've got, but they may understand it could be -- they could be being pessimistic, they could be being optimistic, maybe this is a moment of realism. All they know is their best shot is the ones indicated.

Q. Okay. And so any settlement in the range that you would identify as being welfare-enhancing, both parties would think that the agreement they were entering into was, in fact, worse for consumers, wouldn't they?

A. Well, they're both aware most directly that they like the settlement. This is a settlement which is there in the orange region because they both find it preferable to litigation given their best sense of what they think the litigation odds are.

Q. Well, isn't it --

A. I'm sorry, and we, the outside observer, who we pretend to know the truth, we know that it's good for consumers. That's why the orange bracket is to the left of that mean probable date of entry.

Q. But the parties, when they enter into this settlement, the generic thinks that the settlement is later than any entry date that consumers would find acceptable, correct?

A. Well, that may be the best view, the mean view of the optimistic generic, but the optimistic generic may not -- may be more humble and say, I don't really know that, because if it turns out that I'm actually more pessimistic than usual, then maybe the truth is to the right, maybe the truth is to the left, but I still think I'm getting a good deal from the settlement in view of the mixture of the likelihoods of the different perspectives that I might have.

Q. Well, and the incumbent equally thinks that the agreement that it's entering into, in fact, is anti-competitive, correct?

A. Well, everything I just said about the generic implies -- applies to the incumbent as well. The incumbent might also be humble about its ability to reach an accurate viewpoint. The incumbent might be aware that sometimes it's optimistic, sometimes it's

pessimistic, sometimes it's realistic. Still, what the picture shows as to the reservation time is the one that is the best shot of understanding the truth that the incumbent has, and you're right to say that the orange bracket is to the right of there. Otherwise, it wouldn't be acceptable to the incumbent.

Q. Okay. And so the problem with Professor Bresnahan's analysis in your view is that he would condemn settlements that both parties think are anti-competitive but we subsequently decide they're not. Is that correct?

A. Well, again, the state of mind of these players may not be so clear as what your question suggests, but if we just amend what you said to say Professor Bresnahan's rule is dangerous in circumstances like this because it cuts off the use of net consideration to obtain settlements which we, the outside observer, know are preferable for consumers, that would be an accurate portrayal of the lesson of this case.

Q. Okay. So, you think a better rule is that in a case where both parties think they're entering into a settlement that's worse for consumers than litigation, nonetheless, we should find those settlements under such circumstances would be pro-competitive, correct?

A. I don't think that is correct, actually. I was

saying here that the particular opinions of the incumbent and the entrant, you know, are both off the mark. They may be aware that they might be off the mark, but they're making the best assessments they can and using those assessments in deciding whether or not to accept any given settlement, but we, the outside observer, or we, the fact finder some years later, but using only the information available to the parties, reach our own assessment that, yeah, some flag has been raised by this net consideration, but we look at the agreement as a whole, we look at the best evidence, and if we're in possession of an assessment that we can rely upon that says, look, the mean probable date of entry really was where the diagram shows it, this turns out to be a good settlement for consumers.

Q. Well, Professor Willig, I thought that earlier you had identified concern about antitrust enforcement as being the governor that would keep parties from picking later dates rather than earlier dates. Is that correct?

A. Yes, yes.

Q. Okay. And that governor in this case would keep the parties from entering into settlement at all, wouldn't it?

A. I don't know why that would be the case.

Q. Well, both parties think that the agreement they're entering into is anti-competitive.

A. Well, I'm not sure if they actually have such views with any certainty if they're properly humble about the possibilities of themselves being optimistic or pessimistic, but one thing I would point out in answer to your question is that if the parties are cautious about using net consideration, if they say, look, we have concluded from our negotiating process that we are at an impasse without net consideration and let's use net consideration but only to the extent that's necessary to make an agreement work, then that would bring them on the diagram to the left-hand side of the orange bracket.

Q. Well, the parties don't know where that line is, do they?

A. Which line?

Q. The mean entry date under litigation.

A. No, the parties really do not know where that line is.

Q. Okay. And when you were saying that the parties should be humble, it's not only the parties should be humble in saying even though we think we could get in earlier, why don't we delay entry, that's not only -- besides being humble, it's also profitable,

isn't it?

A. Relative to what?

Q. Relative to the dates that they believe are the true dates of entry if litigation continues.

A. Well, the orange bracket dates are profitable for both parties relative to litigation, given their own views of the odds of succeeding under litigation.

Q. Well, a settlement in the range that you've identified in orange is more profitable to the parties than an entry date at the generic's reservation, correct, with net consideration?

A. The way this diagram shows the context, there is no available settlement at the reservation date of the optimistic generic. I believe that's part of the gap. They can't do that. That's the problem.

Q. Is there anything in your analytics, Dr. Willig, that would predict the conditions under which parties would choose a settlement with lower payouts instead of settlement with higher payouts?

A. No, my analysis doesn't actually represent explicitly within the algebra the force of antitrust sensitivity, but that's what we're talking about now.

Q. And isn't it the case, Dr. Willig, that for any point in the orange region that you've highlighted that there exists another settlement to the right of the

mean probable date of entry under litigation that is more probable for the parties?

A. Yes, I think that's correct.

Q. Okay.

A. That's correct from the point of view of the diagram, but it's not correct from the broader point of view that factors in concerns about legalities, antitrust sensitivity and what the implications might be of having to go through a process of facing antitrust sanctions.

Q. The parties would prefer a settlement to the right of the mean probable date of entry under litigation, a later date, to litigation, correct?

A. There exists a net consideration which could be part of an agreement with a later date of entry that would be more profitable for the parties than litigation. Is that what you said? I don't think so.

Q. Yes. Well, in the range between after the mean probable date of entry under litigation, there exists settlements in the range after that date that the parties would prefer to litigation, correct, with the payment of net consideration?

A. With appropriate payment of net consideration, appropriate to that particular settlement date, yes.

Q. Okay. And a settlement in that range provides

less competition than would be expected under litigation, correct?

A. Yeah. Of course, their preference for such a possible settlement is what's demonstrated on the picture, but that's not a preference that would take into account the broader circumstance in which they face advice by counsel or their own understanding of the antitrust sensitivities about a more unguarded use of net consideration. They might understand that they need to be relatively gentle with the use of net consideration, appropriately so, because of the appearance that that gives to the antitrust authorities and what might be the resulting antitrust scrutiny that they would be subjected to.

Q. So, is it your testimony that the parties, even if it would be more profitable for them to pick a date after the mean probable date of entry under litigation, they won't pick that date, even though they don't know where that line is, and they believe all the settlements in the range you've identified are after the date that would, in fact, be the last date that consumers would accept?

A. I don't think that's what I said, if you're asking me if that's what I said.

Q. Do you agree?

A. I don't think so. But it is true that there exist settlements to the later side of the mean probable date with counterpart amounts of net consideration which, apart from antitrust issues and legal issues and sensitivity to them, would be more profitable for the parties at the same time that it would involve a later date than consumers would prefer, but we need to look through policy, as we often do in the world of antitrust, to legal guidance setting appropriate guidance for business conduct so as to push the applicable settlements to the left-hand side of the picture, and the business conduct that is consistent with that force is if you need net consideration as part of the deal, don't use an excessive amount of net consideration relative to the amount that's needed to make the deal work.

Q. Let me -- let's look at the next demonstrative that you prepared, the signaling chart.

I don't have a lot of questions on this one, Dr. Willig, but just to confirm, this is another one where it's the case that the parties themselves don't know where that mean probable date of entry under litigation line is, correct?

A. No, I don't think that's true. Here the analysis is a particular version of a circumstance

where there is asymmetric information and where signaling is a possibility. In this particular version, which is to hold true to the analytics, the incumbent actually knows, and moreover, the generic potential entrant has everything accurate except the generic doesn't know whether the applicable life of the patent is long or short.

Q. So, is it necessary for your model criticizing Professor Bresnahan in this instance for it to be the case that the parties actually know the true odds?

A. No, I'm quite sure the model -- the conclusions of the model are robust to changes in that part of the setup. The setup, again to focus on the particular effect that this analysis explicates, holds the probabilities as accurately as possible but confines attention to the asymmetry of information on the subject of what is the applicable length of the patent life, but I do believe the model is robust to changes in the assumption about the knowledge of the probabilities of success in the underlying patent litigation.

Q. Okay. Do you believe that it's a realistic assumption to believe that both parties would know the true odds of litigation?

A. I think if one had to conjecture about whether,

in general, litigants will at any applicable time of negotiation agree on litigation odds and have it right from the perspective of an outside observer, that's probably less likely than a circumstance where one or the other has it wrong, but that doesn't mean that these models don't cover those cases in a reliable way. I think they do.

Q. But in those more general circumstances, then the parties won't know where the outside observer stepping in later draws that mean probable date of entry under litigation, correct?

A. I think they can't perfectly predict where an outside analyst would go, but I think they can try to have a sense of that as best they can, understanding that sometimes they're apt to be on the pessimistic side and sometimes they're apt to be on the optimistic side.

Q. Okay. And in those circumstances, for every point that -- of settlement in the orange range that you've highlighted, "Viable Welfare-Enhancing Settlements With Net Consideration," there exists another settlement to the right and later than the mean probable date of entry under litigation that with enough net consideration the parties would prefer, correct?

A. Let me think about that. I think I can help move this along in that many of the circumstances, if one moves somewhat to the orange bracket and therefore somewhere past the mean probable date of entry, there will also be other settlements with amounts of net consideration that would permit those entry dates to be supported by mutually acceptable agreements.

Where I was hedging is that I think if we talk about too much in the way of net consideration, the signaling may be impaired. So, I need to be delicate in answering that part of the question.

Q. Let's look at your last chart. This is a chart you've identified as Misplaced Optimism. One of the assumptions that you've made in this model is that the generic is extremely optimistic, correct?

A. I don't know about the word "extremely," but the generic is optimistic, and the case that's shown is where that optimism is sufficient relative to the risk aversion of the patent-holding incumbent to create a gap between their reservation dates.

Q. Okay. I don't want to actually mark on -- push Mr. Schildkraut's courtesy and mark on his chart, but I'd like to change the hypothetical here a little bit and assume that the risk aversion causes the incumbent actually to go all the way to the point where it meets

or overlaps with the entrant.

A. Yes.

Q. So, in circumstances where the gap between the generic's latest date and the incumbent's earliest date has been closed, so that these lines either meet or overlap, those would be cases in which the parties would be able to settle without the payment of net consideration, correct?

A. Yes, that's correct.

Q. Okay. And just for simplicity's sake, it might be easier just to imagine this line going all the way over to this point, all right, namely, the incumbent's line going all the way over to meet the generic's entry date, so -- I want to ask you some questions.

Assume that the parties otherwise would be able to reach a settlement at the generic's reservation date, okay?

A. By "otherwise," do you mean without net consideration?

Q. Without net consideration.

A. So, the risk aversion is sufficiently pronounced that the arrows meet, period.

Q. Correct. Now, under those circumstances, a rule that said that the parties can enter into a settlement as long as it's before the mean probable

date of entry under litigation is going to result in settlements closer to the mean probable date of entry under litigation than the parties otherwise could have agreed to. Is that correct?

A. What I didn't understand about your question was the part about the rule.

Q. Let me break it down.

Let's suppose there's a rule that says parties can pay net consideration even in cases where they otherwise would be able to settle, and the only restriction on your ability to pay net consideration is that you can't go past or later than the mean probable date of entry under litigation.

Under those circumstances, isn't it the case that the parties' incentives will be to settle for a later date than they otherwise would?

A. I think the answer is probably yes, but I'm not sure we have enough caveats to really flesh out the hypothetical. You're saying there is a possible settlement on the early side without net consideration and that we, the antitrust authorities, the fact finder, know that -- I'm just trying to flesh out your hypothetical -- and we, the antitrust agency or the fact finder, see that that other settlement possibility has been ignored or at least circumvented by a

different settlement with the passage of net consideration and a later date, and that later date either is or is not past the mean probable date of entry, and you're asking me whether that could happen or whether --

Q. No.

A. -- what the policy ought to be toward such circumstances?

Q. No, I wasn't clear, and it didn't have quite as many restrictions on it as that.

It was my understanding from your earlier testimony that you would not limit the rule permitting the payment of net consideration to cases that otherwise wouldn't settle, correct?

A. In my direct testimony, I mentioned today that there were two possible benchmarks that I was aware of against which to compare an actual settlement. One would be litigation, and the other would be some other settlement about which there was sufficient knowledge to reach the conclusion that it was practical and that direct evidence shows that the parties could have actually settled in this alternative way at an earlier date with no net consideration.

And I mentioned that as an applicable benchmark, as a general matter of policy and theory,

and then I saw from a demonstrative and testified that this is what it meant, that Professor Bresnahan asserts in his testimony he's aware of no such thing in this case, and that as a result, the only applicable benchmark is litigation.

Q. Well, it's generally going to be the case, isn't it, Dr. Willig, that we're not going to know whether the parties, in fact, could have settled. They're not going to keep around the draft that they signed just in case litigation comes along to say, well, see, we could have, in fact, settled on other terms.

A. I'm certainly not going to tell you, and I don't think you mean to imply, that we never see direct evidence of antitrust violation. I think we certainly do. There are well-known instances with clear records and direct evidence that things were done that shouldn't have been done, and the documents or the evidence somehow is sometimes available appropriately to the agencies and to the fact finder.

Q. Right. Well, would you apply a screen that said unless the parties proved that they couldn't enter into a settlement otherwise before allowing the payment of net consideration?

A. No, I think that's probably too strong for my

taste, but I think information in that direction might be pertinent within the assemblage of other information that a fact finder ought to be open to hearing in adjudicating a case of this kind.

Q. Well, assuming that for the sake of these questions, assume hypothetically that most cases are able to settle without the payment of net consideration. In all those hypothetical cases, a rule that allows them to pay net consideration is going to result in them choosing a settlement date that's later, correct?

A. See, I don't think that is correct. You asked me to assume first of all that there would be an alternative settlement earlier, possibly, without net consideration? I think that's exactly the assumption that my entire body of work that we spent the whole day on shows is an inappropriate assumption for this kind of an analysis.

Q. So, you don't think it's ever the case that the parties can settle without the payment of net consideration?

A. I didn't say that. I said one can't assume the opposite.

Q. But I'm asking you to assume that there would be cases, some cases, in which there would be the

payment of no consideration, but they would still settle, all right?

A. Oh, I'm sure there are such cases, absolutely.

Q. Okay. Now, in those cases, isn't it going to be the case that there exists another settlement with an entry date later in time that the parties would prefer if they are allowed to pay net consideration?

A. I think within the four corners of the analysis, it is true that where there is mutually acceptable entry date without net consideration, there is also a later entry date, also mutually acceptable to the two parties, which would become mutually acceptable in the face of sufficient payment of net consideration if one confines attention to the demonstrative and to the algebra without taking into account legal advice and concern about antitrust.

Q. Well, I'm not hypothesizing a settlement later than the mean date of entry of litigation, so if that was not clear, let me go back over this.

Suppose the parties could settle without the payment of net consideration. Suppose there was a legal rule that said you can pay net consideration as long as you stop at the mean probable date of entry under litigation. Are you with me?

A. And that's all your hypothesized rule says?

Q. So far. I haven't asked the question, but that's all I've assumed so far.

A. So far. I'm with you so far, then.

Q. In a case where the parties could settle without the payment of net consideration but the legal rule said but you can pay net consideration as long as you don't go later than the mean date of entry under litigation, isn't it the case that for every settlement date that the parties could agree to without net consideration, they would pick another later date if they were permitted to pay net consideration?

A. Within the four corners of the analysis, if there is an entry date that's mutually acceptable without net consideration, there does exist a whole range of later entry dates and supporting net consideration that would be profitable for the parties in the absence of worrying about any legal problems that they might as a result have.

Now, if -- if you stipulate in your hypothetical that they're guaranteed a free pass, no legal concern whatsoever, don't worry, use as much net consideration as you want so long as the entry date stays to the inside of the mean probable date of entry under litigation, if that were a credible legal rule, you're per se okay as long as you're to the left, then

indeed they would have incentives under such a legal environment to push the date of entry out until the point where they might begin to fear some sort of legal scrutiny or some vulnerability.

Q. And that's, in fact, the rule that you've advocated in this case, isn't it?

A. No, absolutely not. We've talked just recently and I've talked on and off all day about what is the applicable benchmark for comparison.

Q. Assuming that we don't have proof of some extant alternative settlement.

A. Well, in this case it's my understanding, based in part on Professor Bresnahan's testimony and I think the complaint as well, but maybe not as clearly as Professor Bresnahan, that complaint counsel is putting forward as the applicable benchmark for comparison that of litigation rather than that of some earlier date of allowed entry under some alternative settlement about which there's sufficient evidence to take it seriously that such a settlement would have been applicable in the absence of net consideration or in the absence of these side arrangements ancillary to the principal settlement of the patent dispute.

Q. I wasn't talking about -- and I'm sorry if I wasn't clear -- about the application of your rule to

this case, but I understood you to be proposing a rule more generally about how we should approach cases in which there's a settlement with a payment of net consideration, and my understanding is that absent some proof of an alternative settlement agreement, you would advocate a rule that says, regardless of whether the parties could or could not settle, as long as their settlement is earlier than the mean probable date of entry under litigation, it should be permitted. Is that correct?

A. No. As a matter of economics -- and I can't opine as a lawyer -- but as a matter of this economist's understanding of Section 2, there's no reason in economics or in economists' conception of the law to confine the applicable benchmark to be that of litigation instead of some other applicable benchmark if there is direct evidence about the reality of that other benchmark. I don't see how you can characterize me as saying anything different.

Q. Dr. Willig, just to -- if I can get away with asking a question about all of your models here, isn't it the case that you're not aware of a single case in the real world where the assumptions that are embedded in each of those models could actually apply?

A. No, that's not the case. My assumption of risk

aversion is based on my view and long experience in the profession that risk aversion is a generally prevalent and important phenomenon for decision-making in the face of risk, and in the context that we're talking about here, namely, settling litigation, it is widely understood that one of the principal purposes and benefits of settlement is to avoid the kind of risk that litigation endemically entails. So, I believe that risk aversion is absolutely endemic to the context that we are together analyzing here.

The presumption of misplaced -- excuse me, misplaced optimism, because it's right on the board, my understanding, and I think Professor Bresnahan agrees with this, is that optimism is, in fact, a very common element of the posture of parties in the context of negotiating over the settlement of patent litigation.

Q. Dr. Willig, I meant that -- we can just take this chart. Are you aware of any case where an optimistic generic and a risk averse incumbent were unable to settle a patent case because they were not able to pay net consideration?

A. No, I'm not aware of any circumstance like that, but I am aware of a wide array of circumstances, including those in this case, where the forces that are being analyzed here are absolutely applicable.

MS. CREIGHTON: No further questions.

JUDGE CHAPPELL: Redirect?

MR. SCHILDKRAUT: No questions.

MR. GIDLEY: Yes, Your Honor, behind the board, briefly. Very briefly, Your Honor.

REDIRECT EXAMINATION

BY MR. GIDLEY:

Q. Dr. Willig, within the last hour, you were asked a question the thrust of which went to the following topic:

Is there judicial or antitrust enforcement official experience with the weighing of the pro and anti-competitive effects of various agreements, including the kinds of settlement agreements in this case. Do you recall that topic on cross examination?

A. Yes, I do.

Q. And at one point you were asked a question about whether or not there was sufficient experience in general with applying a rule of reason in which pro and anti-competitive effects were balanced and weighed, and you were cut off, and I would like you to finish the answer that you had in mind.

MS. CREIGHTON: Objection, Your Honor. I did not, in fact, ask a general question about rule of reason, and the reason I cut off the witness was I was

trying to limit the question specifically to the payment of net consideration in settlements.

MR. GIDLEY: Your Honor, I'm just trying to reference the question. I think we were all here, and at one point -- it's the question where Susan said, "Marc can stand up and ask you for the rest of your answer," and I just happen to be the other Mark Your Honor, and I'm just trying to find the question in the last hour and cue it up for the witness.

JUDGE CHAPPELL: Ms. Creighton, I understand you're clarifying the record. Do you object to the question otherwise?

MS. CREIGHTON: Not if the witness is just being permitted to continue his answer, no.

JUDGE CHAPPELL: Thank you.

BY MR. GIDLEY:

Q. Let's start there, Dr. Willig. You were asked a question by Ms. Creighton, and she cut you off and said to let Marc get the rest of your answer. Could we get the rest of your answer, sir?

A. Thank you, and thank you for reminding us that you are also the Mark.

The important point that I think is worthwhile making at this juncture is that while there is not, to my knowledge, a great deal of experience in the

antitrust agencies and perhaps even in the courts in weighing the pros and cons of the different features, including net consideration, that might arise in an agreement to settle an underlying patent dispute, and while it may seem somewhat daunting in thinking about the challenges that would face antitrust agencies and antitrust fact finders in sorting out the pros and the cons, nevertheless, I understand that there is a great deal of judicial and agency experience in dealing with the weighing of such pros and cons entailing agreements between firms who might be competitors and who might in some sense otherwise find common ground that would be socially beneficial, including beneficial to consumers, not to say that these are not challenging cases and not to say that a great deal of experience is needed to be developed both by the agencies and by the courts to deal with these challenges reliably and well.

But nevertheless, our understanding, the economists' understanding of antitrust enforcement, is that Section 2, our antitrust agencies and the courts are basically up to the challenge. The answer is certainly not -- when such a challenge is seen to be somewhat daunting, the answer is not to replace full-blown, appropriate, pro-consumer Section 2 analysis with some per se bright line rule which is

understood to have very seriously possible negative consequences for the economy generally, including possible negative influences on consumers' interests, and that's I think the situation that we're facing in this area in this case at this time.

Q. Sir, do you have an understanding that the antitrust agencies have many years of experience in applying the rule of reason?

A. To my knowledge, absolutely the case, yeah.

Q. How about the courts, in your years both in the Government and now outside of Government in academia, do you have the same understanding about the federal courts in this country?

A. Yes, the courts, too, have a long experience in dealing with the ambiguities that necessarily come up in applying Section 2 to business arrangements.

Q. You were asked a variety of questions about your credentials in various areas, such as negotiation and your ability to craft rules for intellectual property. I want to just generally talk about your own background.

Sir, do you have any background in assisting the Government agencies with fashioning antitrust policy in terms of guidelines?

MS. CREIGHTON: Objection, Your Honor, this

would seem to go beyond the scope of cross.

MR. GIDLEY: I don't believe so, Your Honor. The implication of the questions and some of the express terms of the questions and the answers were exactly on whether or not Dr. Willig had the kind of experience that would be relevant in this proceeding.

JUDGE CHAPPELL: So, what are you trying to do, lay a foundation after the fact?

MR. GIDLEY: No, Your Honor, I'm simply trying to rehabilitate the witness or make clear in our paper record what this witness' background is that's applicable to the dispute in question.

JUDGE CHAPPELL: I'll overrule the objection at this time. Let's see where he's going.

THE WITNESS: In the early eighties, I was asked by officials at the Antitrust Division of the Department of Justice to be part of the process of reviewing early drafts of what later became the 1982, the 1984 merger guidelines, and then later on in my own time in office as Deputy Assistant Attorney General in the Antitrust Division of the U.S. Department of Justice, one of my principal responsibilities was, in fact, to draft, to create the updated version of the FTC and DOJ horizontal merger guidelines by making use of the best economics and the experience of the

agencies over the course of enforcement of the Sherman and the Clayton Acts.

It's not easy to do guidelines, but it's of exceptionally great importance to be open to the complexities that appropriate guidelines require and to steer very, very clear of falling prey to some sort of despair at the complexities and going to an entirely inappropriate per se inflexible rule instead. The agencies have shown that they are up to the task both in terms of merger guidelines, in terms of intellectual property guidelines, which also take on such complexities, and now also the competitor collaboration guidelines of the FTC and the Department of Justice, all of those guidelines dealing with the same kinds of complexities and ambiguities that we see in cases of this kind, and yet in each of those instances, the appropriate reaction of the agencies is to steer clear of inappropriate inflexibility, use their experience, use their analysis, and come up with textured guidelines that make sense for the issues at hand.

MS. CREIGHTON: Your Honor, I would move to strike the witness' answer starting from line 36. It's not responsive to the question, which was about his background.

MR. GIDLEY: May I respond, Your Honor?

JUDGE CHAPPELL: I'm disregarding everything after "course of enforcement of the Sherman and the Clayton Acts."

MS. CREIGHTON: Thank you, Your Honor.

JUDGE CHAPPELL: Next question.

BY MR. GIDLEY:

Q. Dr. Willig, you were asked a series of questions about Dr. Ordover. Did Dr. Ordover agree with the Bresnahan test?

MS. CREIGHTON: Objection, Your Honor, I think the witness stated that he couldn't recall, so I asked him no questions about the document, about Professor Ordover's opinions.

MR. GIDLEY: I'm ready on that, Your Honor. The quotes from the realtime transcript at page 238 and 239 are as follows.

"I do recall reviewing something of this character," when he was shown the report, and "I recognize the hand of professor Ordover." My question asked does he remember Ordover's overall conclusion.

JUDGE CHAPPELL: Overruled.

MS. CREIGHTON: Your Honor, I guess I would further object in that it's beyond the scope.

MR. GIDLEY: She showed him --

JUDGE CHAPPELL: I think he just indicated it's

within the scope. Overruled.

THE WITNESS: My recollection of the parts of my review of Ordover's work is that my reaction was finding that he did, indeed, agree with me in my reaction that Professor Bresnahan's test was dangerous and inappropriate, and I think in terms of general conclusions, he did come out in the same place that I did.

MR. GIDLEY: All right, we're close to the end, so just bear with me --

JUDGE CHAPPELL: I know, you did say very briefly, I think, when you --

MR. GIDLEY: I have two more "very brieflies," Your Honor.

JUDGE CHAPPELL: Okay.

BY MR. GIDLEY:

Q. All right, I have put on the screen without the assistance of my right hand, Raj Malik, a quote from the Shapiro document that Ms. Creighton published to you earlier today. Do you recall seeing the document earlier today in the exam?

A. I do.

Q. I want to direct your attention to the first highlighted paragraph. Are you able to make it out there?

A. It's not easy.

Q. I'll try to hold it flat.

A. Oh, that's better.

Q. And I will read it out loud. Again, this is from this March 20, 2001 Carl Shapiro document, CX 708, at page 10:

"Since disputes tend to arise when there are conflicting views of success at trial, it may be necessary to find 'win-win' approaches, i.e., mutually beneficial trades, to break the deadlock. In fact, some of the most effective and creative negotiators work their art not by haggling simply over price, but by looking along multiple dimensions for ways in which the parties to the dispute can trade with each other for mutual benefit. I hope the Commission would agree that prohibiting litigants from trading non-financial assets and making side deals as part of a patent settlement would greatly impair the settlement process. For example, virtually all cross-licenses could be swept up in such a rule."

Do you see that passage, sir?

A. Yes, I do.

Q. And sir, do you agree with the views of Dr. Shapiro in connection with the views he expressed in those sentences?

A. I do agree with almost all of the material you read. The last sentence, however, "For example, virtually all cross-licenses could be swept up in such a rule," goes beyond the material that I feel secure in endorsing here.

Q. Well, let me just make sure that I'm clear. Could you agree, sir, that in general, you would hope that the FTC would agree that prohibiting litigants from trading nonfinancial assets and making side deals as part of a patent settlement would greatly impair the settlement process?

A. Yes, I do agree with that.

Q. All right. Finally, sir, just down on the same page, Dr. Shapiro wrote in March of last year, a year ago:

"This approach would, in my opinion, be far superior to the approach that staff seems to be advocating to flatly prohibit parties involved in patent litigation from finding creative ways to resolve their disputes by engaging in mutually beneficial trades to smooth the settlement process. Such an inflexible and blunderbuss policy would greatly impede the settlement of patent disputes, and would block many pro-competitive settlements."

Do you see that language?

A. I do.

Q. Do you agree with those two sentences?

A. I certainly agree with the portion that rejects the approach of the staff as characterized by Shapiro to be advocating flatly prohibiting parties involved in patent litigation from finding creative ways to resolve their disputes by engaging in mutually beneficial trades to smooth the settlement process. I also agree with the last sentence, "Such an inflexible and blunderbuss policy --" yeah, I'll embrace those adjectives " -- would greatly impede the settlement of patent disputes, and would block many pro-competitive settlements."

Q. All right, it's late, and here's the last question. I want to show you an excerpt, Dr. Willig -- sorry for the orange, I didn't know you were color blind, I apologize -- but do you see, sir, the sentence that we've yellow highlighted -- just a second -- this is from the FTC's trial brief which was written in January of this year.

"This case does not challenge the settlement of patent disputes by an agreement on a date of entry, standing alone, or the payment of fair market value in connection with 'side deals' to such an agreement."

Do you see that language?

A. Yes, I do.

Q. The second part of the sentence, that the FTC in this case does not challenge the payment of fair market value in connection with side deals to such an agreement, do you agree with that view?

A. I agree that that is a wise decision if that is, indeed, the decision of complaint counsel.

MR. GIDLEY: No further questions, Your Honor.

JUDGE CHAPPELL: Recross?

MS. CREIGHTON: Just on one subject, Your Honor.

RECROSS EXAMINATION

BY MS. CREIGHTON:

Q. In stating that you agreed with Professor Ordover's general opinion, it was his opinion, wasn't it, that a settlement that falls within the range between the generic's estimate of its entry date and the incumbent's estimate of its entry date, within that range settlements should be prima facie reasonable, correct?

A. I think that takes us back to what you asked me about before, was that paragraph 20 or so?

Q. Well, is that the opinion that you were referring to?

A. No, no, that's the part actually that I don't

recall freshly enough to testify about today. What I was remarking about in my answer to the questions of Mr. Gidley had to do with the overarching conclusions in the first few pages of that document that you showed me. It was those paragraphs in the early few pages that I just reviewed as you were showing me the document and that reminded me that I had, indeed, seen paragraphs much like those or exactly those at some time in the past, and it was those paragraphs that I recall as being properly characterized in my own mind as Professor Ordover basically agreeing with me in first of all rejecting Professor Bresnahan's so-called rule and also agreeing with me that that rule would be dangerous because there do exist substantial circumstances where using net consideration as a tool for helping to settle patent disputes is a good thing for consumers and a good thing for the economy.

Q. In paragraph 20, Professor Ordover says, "It is my view that an entry date reached through a settlement that falls within such a range," he's talking about between the parties' two estimated entry dates, "should be considered as being prima facie reasonable. An entry date reached through a settlement that lies outside of this range might be seen as 'lengthening' the expected 'legitimate' life of the patent."

Do you agree with that?

MR. SCHILDKRAUT: Objection, Your Honor, asked and answered.

JUDGE CHAPPELL: We'll hear it again. Overruled.

THE WITNESS: I'm just not clear enough on what he's saying with those words outside of the context that I don't recall as I sit here to be able to say whether I agree with him when he says those words or not.

BY MS. CREIGHTON:

Q. If he were saying that a settlement that lies later than either party's subjective estimate of their entry date under litigation should be presumed to be anti-competitive, you would agree or disagree with that?

A. I can't accept the context for what conclusion he's drawing based on what assumptions. I mean, I've got analyses that we've been through today where because of the third-party entry date or because of signaling, there's other applicable regions where the settlements are clearly pro-consumer, and I'm not sure if he's deliberately assuming those kinds of circumstances away or -- I just don't recall the setting for the reading of paragraph 20 clearly enough

to tell you as I sit here whether I agree with him in that respect or not.

Q. Okay. So, a rule that said you can't have an entry date later than either party expects under litigation, that would be a rule you would reject, correct?

A. That would be a rule that I would what?

Q. Reject.

A. I didn't say that. I said I can't come to grips with that without understanding the surrounding context, and therefore, I can't answer your question as I sit here, because I don't know the surrounding context.

MS. CREIGHTON: No further questions.

JUDGE CHAPPELL: Anything else?

MR. GIDLEY: No further questions, Your Honor.

JUDGE CHAPPELL: Thank you, Dr. Willig, you're excused.

THE WITNESS: Thank you.

JUDGE CHAPPELL: Mr. Curran?

MR. CURRAN: Your Honor, may I be so bold as to raise a housekeeping matter? We discussed the possible acceleration of briefing with regard to our motion on rebuttal witnesses.

JUDGE CHAPPELL: Okay.

MR. CURRAN: And Your Honor, I believe, suggested the possibility of an argument on that matter perhaps on Tuesday?

JUDGE CHAPPELL: Tuesday afternoon, yes.

MR. CURRAN: I wanted to raise that, Your Honor, because we have been given notice that complaint counsel's first proffered rebuttal witness who was noticed for Wednesday of next week is among the rebuttal witnesses that we are challenging. So, moving quicker rather than slower on that motion may be appropriate.

JUDGE CHAPPELL: Ms. Bokat, you're up.

MS. BOKAT: Thank you, Your Honor.

JUDGE CHAPPELL: When can you have a written response to this motion?

MS. BOKAT: Well, it's an important motion. We're certainly not proposing to ask the Court for a whole ten days, but the motion seems to seek to strike six or maybe seven of our rebuttal witnesses. So, we do need time to adequately answer that.

JUDGE CHAPPELL: Well, since we don't have any witnesses Monday and Tuesday, I'm going to need something Monday -- I'm going to need something Tuesday morning by 10:30, because we're in the middle of trial, this involves ongoing witnesses, and these are not

normal circumstances.

MS. BOKAT: 10:30 Tuesday morning?

JUDGE CHAPPELL: Yes.

MS. BOKAT: The Court will have it.

JUDGE CHAPPELL: And I am going to hear oral argument on this motion at 2:00 p.m. Tuesday right here. Any problem with that?

MS. BOKAT: Not from complaint counsel.

MR. CURRAN: Not at all, Your Honor. Thank you very much.

JUDGE CHAPPELL: I'll also hear oral argument on the -- what's the final title -- the motion to dismiss?

MR. CURRAN: That is what we titled it.

JUDGE CHAPPELL: Directed verdict, what is it?

MR. CURRAN: It's called a motion to dismiss. I think colloquially it might be called motion for directed verdict.

JUDGE CHAPPELL: Okay, I will also hear that on Tuesday.

MS. BOKAT: Your Honor, on that motion, I think we've already had oral argument on it at the conclusion of complaint --

JUDGE CHAPPELL: Well, I think we had partial argument on that. I'd have to go back and check. I

don't remember over 6000 pages, but I know that they attempted to argue it. I know I heard partial argument on it. Now that I have the briefs, I'll allow argument -- further argument on it, not lengthy argument, summarized argument.

MR. CURRAN: Very good, Your Honor.

JUDGE CHAPPELL: Anything further?

Mr. Nields, you're rising as if you are going to speak.

MR. NIELDS: I was rising, hopefully I will speak if the Court will -- is willing to hear me.

JUDGE CHAPPELL: Okay.

MR. NIELDS: Just very briefly, Your Honor, I think Mr. Curran indicated, and perhaps I did earlier, that this concludes the -- our last witness I think for both of us. We do have document issues that we're still in discussion with complaint counsel about. We're hopeful we can reach agreement. If we can't, we will need to bring them to the Court's attention for the Court's decision. We're perfectly prepared to do that either before or after the 2:00 on Tuesday argument. We would be prepared to address it earlier than that, too, at the Court's pleasure.

JUDGE CHAPPELL: I want to allow complaint counsel to focus on their written response to the

pending motion, so that that's -- that's something that I will -- I will consider that at the hearing Tuesday afternoon.

MR. NIELDS: Excellent. Thank you, Your Honor.

MR. CURRAN: Thank you, Your Honor.

JUDGE CHAPPELL: Okay, we're adjourned --

MS. BOKAT: Your Honor, with trepidation, could I raise one thing very briefly?

JUDGE CHAPPELL: Yes.

MS. BOKAT: I just wanted to alert the Court that complaint counsel filed a motion today, and I give courtesy copies to respondents' counsel, to add one rebuttal witness. I'm not asking for a ruling from Your Honor, and I'm not asking for a response from respondents' counsel, but I just wanted to be aboveboard and let the Court know what we are doing.

MR. CURRAN: Your Honor, we're comfortable addressing this at 2:00 on Tuesday, and we can have a brief responding to this by 10:30 Tuesday morning.

JUDGE CHAPPELL: Okay, and let me give you a little bit of my philosophy on responding to these motions, Ms. Bokat, because you're the one who doesn't have your ten days to respond. Under normal circumstances, a written motion, you would have ten days to respond. During trial, I consider a written

motion to be a courtesy so that I don't have to hear something on the fly in the middle of trial and deal with it that day. So, things are just not normal when we're in the middle of a hearing or a trial. That's why I need to expedite your response, and hopefully I can get a ruling to you late Tuesday so that either all the witnesses come or they don't come, and I can save some unavoidable travel if that's the way it goes.

Anything further?

MR. CURRAN: Thank you for indulging us on a Friday afternoon, Your Honor.

JUDGE CHAPPELL: I guess that leave early on Friday rule is just gone.

Okay, we are adjourned until 2:00 p.m. Tuesday. Thank you, have a good weekend.

MR. GIDLEY: Thank you.

MR. NIELDS: Thank you, Your Honor.

(Whereupon, at 6:00 p.m., the hearing was adjourned.)

C E R T I F I C A T I O N O F R E P O R T E R

DOCKET/FILE NUMBER: 9297

CASE TITLE: SCHERING-PLOUGH/UPSHER-SMITH

DATE: MARCH 8, 2002

I HEREBY CERTIFY that the transcript contained herein is a full and accurate transcript of the notes taken by me at the hearing on the above cause before the FEDERAL TRADE COMMISSION to the best of my knowledge and belief.

DATED: 3/11/02

SUSANNE BERGLING, RMR

C E R T I F I C A T I O N O F P R O O F R E A D E R

I HEREBY CERTIFY that I proofread the transcript for accuracy in spelling, hyphenation, punctuation and format.

DIANE QUADE